# Oil, Paint and Drug Reporter.

VOL. XXXIV. No. 10. NEW YORK, WEDNESDAY, SEPTEMBER 5, 1888. PRICE PER YEAR, If paid in advance, $4.00. $6.00.



## E. MERCK,

Manufacturing Chemist,

No. 73 William St., NEW YORK.

Acid benzoic, from Toluol,
" chrysophanic (Chrysarobine),
" Gallic, cryst.,
" lactic, white,
" phosphoric, syrup consistency,
" salicylic,
Aconitine,
Aloine,
Amygdaline,
Antifebrine,
Apo-morphine
Atropine,
Butyl chloral, hydrate,
Caffeine,
Chloral Hydrate,
Cocaine,
Codeine,
Creosote,
Digitaline,
Ergotine,
Erythrophleine, Hydrochlor.,
Eserine, (Physostigmine,)
Eucalyptol,
Extract of Male Fern,
Homatropine,
Hydrastine,
Hydrochinon,
Hyoscyamine,
Hyoscine,
Iodol,
Iron, reduced by Hydrogen
Lactucarium,
Lithia preparations,
Mollin,
Pancreatine,
Pancreatine-Pepsine,
Papayotine,
Par-aldehyd,
Pepsine, 1 : 1000,
Pilocarpine,
Potassium, per-manganate,
Resorcine,
Salicine,
Salol,
Sparteine,
Tereben,
Terpine Hydrate,
Thalline, sulphate,
Thymol,
Tincture: Strophanthus-seed,—1:20,
Ur-ethan,
Veratrine,
&c., &c., &c.

## ALCOHOL

AND COLOGNE SPIRIT.

ESTABLISHED 1885 JAMES A. WEBB & SON, 165 Pearl St. NEW YORK.

## Bergen Port Sulphur Works,

ESTABLISHED 1841.

T. & S. C. WHITE,

MANUFACTURERS OF

Roll and Virgin Rock Brimstone

And Sublimed (Chamber) Flowers of Sulphur.

30 BURLING SLIP NEW YORK.

## CORKS

JOHN ROBINSON & CO.,
45 Murray St., New York.

FLETCHER MANUFACTURING CO., ESTABLISHED 1793.

FLETCHER WICK, IMPROVED AND PATENTED. FOR LIGHT OR HEAVY OILS.

Factories: Providence, R.I

WAREHOUSES:
18 & 20 Thomas Street, New York, W. B. Fletcher Agent.
119 Franklin Street, Boston, S. G. Trippe, Agent.

PURE UNCOLORED

## DALMATIAN INSECT POWDER

S. & F. Brand,

STALLMAN & FULTON,

IMPORTERS OF DRUGS,

No. 10 Gold Street, NEW YORK.

## LEHN & FINK,

IMPORTERS OF

Foreign Drugs, Chemicals, and Essential Oils.

*NEW REMEDIES are our Specialty.*

128 WILLIAM STREET, NEW YORK.

ALCOHOLS, Amyl, Butyl and Propyl.

FUSEL OIL, Foreign and Domestic.

AMYL, Acetate and Valerianate.

RICHARDS & CO., - - 41 Barclay Street, NEW YORK.

T. & H. SMITH & CO., EDINBURGH, SCOTLAND. } MORPHINE

F. J. Macnaughtan, 20 Cedar St., New York.

SOLE MANUFACTURERS OF

## ALCHOLENE

AND SPECIAL EXTRA REFINED

WOOD ALCOHOL,

92, 95 and 97 Per Cent.

New York Office, - - - 195 Water Street.

AGENTS:

MARTIN THAYER, Brockton, Mass. | F. W. THURSTON & Co., Chicago, Ill.
PAUL A. DAVIS, JR., Philadelphia, Pa. | C. HERBOTH & Co., St. Louis, Mo.

## Prince Manufacturing Co.

—AND—

Prince's Metallic Paint Co.

DAVID PRINCE, Sec'y and Treas.

71 Maiden Lane, - - - New York.

F. W. DEVOE & CO, Fulton St. cor. William, NEW YORK.

PAINTS, VARNISHES, BRUSHES, ARTISTS' MATERIALS.

COFFIN, DEVOE & CO. 176 Randolph St., CHICAGO.

## EDWARD SMITH & CO.

158 WILLIAM STREET, NEW YORK.

E.S. 1827 &Co.

## VARNISHES, COLORS.

## ST. DENIS DYESTUFF & CHEMICAL CO., L't'd.

Of Paris, France, A. POIRRIER, President.

ANILINE DYES, OIL AND SALT, ARCHILL, CUDBEAR, CACHOU DE LAVAL, INDIGO EXTRACT MIRBANE OIL, PATENTED AZO DYES, &c.

E. COEZ & CO.'S French Dyewood Extracts.

Sole Agents in the U. S., SYKES & STREET,

35 India St., Boston. 21 Cedar St., New York. 43 N. Front St., Philadelphia.

# THE PEERLESS REFINING CO.,

Producers, Convevors and Refiners of

# PETROLEUM

## AND ITS PRODUCTS.

We Guarantee our goods EQUAL, if not superior, to any on the market.

REFINERIES
Cleveland, Ohio,
—AND—
Findlay, Ohio.

GENERAL OFFICES:
*50 Wade Building,* *CLEVELAND, OHIO.*
CORRESPONDENCE SOLICITED.

# THE NATIONAL REFINING CO.

## Refiners of Petroleum and its Products.

FILTERED AND STEAM REFINED CYLINDER STOCKS.

## SUPREME LIGHT Burning Oil, Best in the World.

Offices, Wade Building, CLEVELAND, O.

Trade Mark.

# AJAX ANTI ACID AND ALKALI METAL

Next on the List to PLATNUM for Resisting ACIDS and ALKALIES.

We make CASTINGS of every description, from ONE pound to FIVE THOUSAND pounds. Also COCKS, VALVES and FITTINGS. GUARANTEE 300 PER CENT. longer service than any known composition on the market.

REFERENCES IF DESIRED. PRICES REASONABLY LOW.

MANUFACTURED ONLY BY

THE AJAX METAL CO., Philadelphia, Pa.

CAUTION—Parties using our trade mark in any manner will be prosecuted.

# GENESEE OIL WORKS.

J. C. & W. H. BRIGHT, Propr's. Refiners and Manufacturers of

## Filtered Cylinder, Engine and Lubricating Oils

Adapted to

All Classes of Machinery.

*Office and Works,* *BUFFALO, N. Y.*

H. W. DOPP & SON
MANUFACTURERS OF

## SOAP MAKERS' MACHINERY

Patent Steam Jacketed and Enamelled Kettles, Steam Presses, Lever Presses,
DOPP'S
Patent Soap Remelting Crotchers
SOAP DIES
462 Ellicott St., . BUFFALO, N. Y
Mention this paper when writing

## Announcement to the Wholesale Drug and Oil Trades

# Cleveland Petrolatum Co.

H. M. BROWN, Manager,

Original and Largest Manufacturers of Petrolatum, U. S. P.

In addition to their increased production of Densoline Petrolatum, U. S. P. and Petrolatum B. P., and the largest line of Medicinal and Toilet Goods therefrom, we are now manufacturing a full line of

## Best Lubricating Oils,

Including Gelatine, Castor Machine Oil & all Gelatine Oils

by a new process *directly from Lard.* We offer Gelatine and Castor of light Straw Color, 23° gravity and at 26° gravity in clear white and brilliant, and guarantee these oils will not separate. Prices very low. Samples furnished to Wholesalers.

Cleveland Petrolatum Co.,

771 to 773 PEARL STREET CLEVELAND O. U. S. A.

# The Lithograph Tin Ware Co.

MANUFACTURERS AND LITHOGRAPHERS OF

## PAINT, OIL AND VARNISH CANS,

## ROUND, SQUARE AND OBLONG METAL BOXES

FOR

## Dry Colors, Petroleum and Druggists Specialties.

88 and 90 Champlain St.,

CLEVELAND, OHIO.

Correspondence Solicited.

EDWARD FORD, PREST. A. PITCAIRN, VICE-PREST. E. L. FORD, SEC'Y. JOHN F. SCOTT, TREAS.

# PITTSBURGH PLATE GLASS CO.,

PAID UP CAPITAL, $2,000,000.

MANUFACTURERS OF

# POLISHED PLATE GLASS

Ground and Rough Plate Glass for Floors and Skylights, Three-sixteenths thickness, made expressly for fine residences.

**LARGE AND WIDE GLASS A SPECIALTY.**

The Largest Plates of Glass in the cities of Chicago, Cleveland, Detroit, St. Paul, Syracuse, Pittsburgh, Philadelphia, Baltimore and in many New York buildings, were manufactured at our works.

## IMMENSE PRODUCTION.

The combined production of our two factories is 260,000 square feet per month. The largest production of any factory in the world, which enables us to fill our orders promptly. The high reputation and unprecedented large sales of glass made by this company since its organization is due entirely to its superior quality, NATURAL GAS alone being used throughout both works as fuel.

WESTERN UNION WIRE AND TELEPHONE CONNECTIONS IN GENERAL OFFICE.

CREIGHTON, PA.

The Tidewater Pipe Co. L't'd. Ocean Oil Co., New York. The Chester Oil Co., Philadelphia.

# POLAR OIL COMPANY,

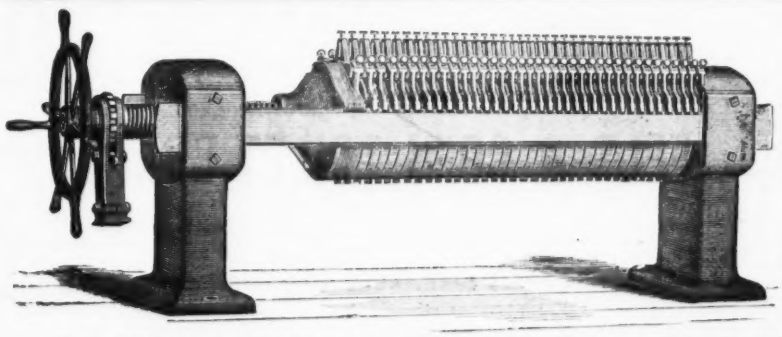
MANUFACTURERS OF LUBRICATING OILS.

# Paraffine Oils & Paraffine Wax

FILTERED CYLINDER STOCK. 300° ILLUMINATING OIL.

COLD TEST AND SUMMER BLACK OILS.

New York Office, Cor. Broadway & Beaver St. Chicago Office, 205 La Salle St.



IMPROVED

# FILTER PRESSES.

MANUFACTURED BY

## The G. H. BUSHNELL CO.,

For Filtering and Refining China Clay, Colors, Oils, Paraffine Wax, Prussian Blue, Syrups, Yeast, Etc., Etc., Etc.

Also Manufacturers of

## Patent Nuckle-Joint Presses, and Iron Machinery Castings.

PRESSES FOR NEW AND DIFFICULT WORK A SPECIALTY.

ALSO MACHINERY CONTRACTORS.

THOMPSONVILLE, CONN.

On N. Y., N. H. & H. R. R., (the main line between New York and Boston) 17 miles north of Hartford, Conn., and 9 miles south of Springfield, Mass.

H. JULIUS KLINGLER, Pres't. ROBT. C. SCHMERTZ, V. Pres't. A. F. CHANDLER, Sec'y. & Treas.

# Standard Plate Glass Co.,

MANUFACTURERS OF

# Polished Plate Glass.

ALSO

Rough and Ground Glass of any desired thickness for floors and Skylights. We manufacture glass of any size, from one foot square to as large as can be shipped.

NATURAL GAS is the only Fuel used about our works.

BUTLER, PA.

# ADVERTISERS.


### BRUSHES.
Devoe & Co., F. W. 1
Hoffmann, Louis 20

### CHEMICALS.
Atlantic Sulphur Works 53
Battelle & Renwick 54 & 55
Bellhouse, Dillon & Co. 63
Bergen Port Sulphur Works 1
Billings, Clapp & Co. 56
Binns, Jos. 55
Blackwell, Geo. G. 44
Brooklyn Sulphur Works 55
Brunner, Mond & Co., Ld. —&52
Burcey Chemical Co. 18
Chappell, & Co W. H. —
Chemical Importing & M'f'g Co 55
Clapp & Co., B. P. 55
Davis, Wolt & Co. 59
DeHaen, E. 54
Dundee Chemical Works 55
Eimer & Amend 47
Fairfield Chem. Co. 53
Fergusson Bros. 54
Gabriel & Schall 17
Gamble, & Son Jos. C., 56
Gridley & Co. 56
Hendrickson, J. B. 45
Herf & Frerichs Chemical Co. 52
Hill's Sons & Co., Edward 52
Jarrow Chemical Co. 52
Jayne Chemical Co., H. W. 44
Knowles Bros. 55
Larkin & Scheffer 54
Lee & Co., Jas. 52
Liebman & Butler 44
Linder & Meyer 54
Mason, Chapin & Co. 55
Mathieson & Co., N. 53
Meyer, G. A. & E. 54
Michigan Carbon Works. 22
Mort, Liddell & Co 4 & 55
Newcastle Chemical Works Co. 54
N. Y. Tartar Co. 34
Niagara Laboratory 54
Nichols & Co., Geo. H. 56
Passaic Chemical Co 64
Penna. Salt Manufacturing Co. 53
Philadelphia Copperas Works. 55
Powers & Weightman 63
Richards & Co 1
Riker, J. L. & D. S. 54
Rosengarten & Sons. 45
Salmon & Co., H. H 55
Slocum, Lloyd & Orr. 59
Solvay Process Co. 52
Stanway & Bayley 53
Tartar Chemical Co. 63
Thomsen, Alonzo L 54
Union Chemical Works 63
Warren & Co. 53
Welch, Holme & Clark 58
White & Son, Chas. T 44
Wiards, J. C 55
Wing & Evans 52 & 54
Wood Extract Co 21

### CHEMISTS.
Rupp, Wm. 53

### DRUGS, &c.
Baker, & Bro. H. J. (castor oil) 44
Bernard & Co., Leo. 48
Boehringer, & Sons C. F. 45
Buffalo Alcholene Co. 1
Burroughs, Wellcome & Co. —
Colton, J. W 64
Dickinson Co., Albert 46
Dodge & Olcott. 46
Eimer & Amend 47
Evans, Sons & Co. 64
Fahnestock, B. S. 4
French, Richards & Co. 45
Hammerschlag S. 64
Hillier's Son Co., R. 46
Hill's Son & Co., Edward. 52
Hop Remedies Co. 48
Howe & French. 44
Lang & Son Wm 48
Lehn & Fink 1
Liebman & Butler 44
Lutz & Movius. 44 & 64
Macnaughtan, F J 1
Maltine M'f'g Co —
McAllister, F. E 45
McIlvaine Bros. 44
McKesson & Robbins. 45
Merck, E. 1 & 45
Merz Capsule Co 44
Moore, J. E. 63
New York Coal Tar Chemical Co. 59
New York Quinine & Chemical Works. 45
Parke, Davis & Co —
Pfizer,& Co Chas. 63
Roessler & Hasslacher. 64
Rogers & Pyatt. 44
Ropes, E. W. 45
Runkel Bros. 48
Salomon & Bro., L. A. 34
Schieffelin, & Co W. H. 45
Schering & Glatz. 54
Schwartz, & Co J. E. 4 & 34
Sitterly, C. W. 45
Smith & Kline Co. 64
Stallman & Fulton. 1
Starace, Achille. 64
Strohmeyer & Co., F. G. 45
Thomsen, John J. 45
Thoms & Co 48
Tyler & Finch 46
Webb & Son, Jas A. 1
Zimmer & Co. 45

### DYESTUFFS.
Bloomfield & Co., J. C. 59
Bush, Chas. S. 58
Coez., & Co E. 58
Consolidated Ultramarine Co. 59
De Ronde & Co, Abram, 35
Fabriques de produits Chimiques de Thann et de Mulhouse 59
Heller & Merz 59
Holliday's Sons, Read 58
Hollingsworth & Peterson 52 & 59
Howe, Balch & Tay 59
Kalion Chemical Co. 59
Klipstein, A 34
Lewis, John D. 58
Matheson & Co, W. J., 64
McKenna, J. T. 59
Morgan & Co, Jas. L. 59
New York Dyewood Extract and Chem. Co. 63
Pickhardt & Kuttroff, Wm. 58
Ross & Bro., W. A. 35
St. Denis Dyestuff & Chemical Co. 1
Schoellkopf, Hartford & Maclagan. 45, 52 & 58
Schulze-Berge & Koechl —
Sharpless & Co, John M. 59
Sykes & Street 1 & 58
Taylor & Barker 59
Weller & Co., J. W. 35

### ESSENTIAL OILS
Brandt & Kienzler 48
Charras & Co. 46
Codman & Hall 46
De Pasquale & Figli, Santi —
Dodge & Olcott 46
Frey, E. & S. 46
Hill's Son & Co., Edward 52
Hires, C. E. 46
Holstein, O. 44
Leeming & Co., Thos 46
Liebman & Butler 44
Peirson & Perkins 48
Rockhill, Clayton 46
Sozio & Andrioli 45

### GLASS.
Crystal Plate Glass Co. —
DePauw's American Plate Glass Works. 12
Pittsburgh Plate Glass Co... 3
Semmer & Co., Phillip. 12
Standard Plate Glass Co. 3
Vanhorne, Griffen & Co... 17

### GLYCERINE.
Chicago Glycerine Co. 63
Goodwin Manufacturing Co. 63
Laist & Hochstetter. 63
Marsh & Harwood Co 63
Marx & Rawolle. 63
Procter & Gamble. 63
Schering & Glatz. 54
Werk & Co., M. 63

### MACHINERY, TANKS ETC.
Burrows, Savery Co. 12
Berrill & Son, J. A. —
Bushnell Co., The G. H. 3
Carver Cotton Gin Co. 27
Carey, Samuel. 31
Dopp & Son, H. William. 2
Foos Manufacturing Co., The. —
Guild & Garrison. 24
Hall Manufacturing Co. 23
Huyett & Smith Mfg. Co 23
Kaestner & Co., Charles. 22
Newhall & Bro., Geo, M. 23
Phillips C. C. 4
Pollock & Co., Wm B. 24
Ross, Chas. Jr. 14
Simpson, J. S. & G. F. —
Smith & Vaile Co., The 13
Taylor & Sons, Wm. 28
Thompson & Campbell. 23
Young Geo, A. 20

### MISCELLANEOUS.
Ajax Metal Co. 2
American Wick M'f'g Co. 43
Anchor M'f'g Co. 27
Boston Mailing Box Co. 47
Bowdlear & Co., W. H. 44
Breffit's Aire & Calder Bottle Co. 44
Brown Bros. & Co. 64
Campbell & Co, J. B. 47
Cowburn, W. H. 28
Excelsior Manufacturing Co. 4
Fletcher Manufacturing Co. 1
Jones & Co., S. L. 47
Lenox Law & Collection Co. 4
Lithograph Tin Ware Co., The. 2
Morley Respirator Co. 22
N. Y. Belting and Packing Co. —
Notices. 12
Plume & Atwood Manufacturing Co. 27
Postal Package Co. 47
Remmey, Richard C. 55
Robinson & Co., John—Corks 1
Schofield, E.—Oil Press Mats. 28
Sugden, Thos., Press Bagging 64
U. S. Bottle Packing Co. 44
Vogel & Bros, William. 63

### NAVAL STORES.
Peace & Co., J. R. 12
Rose, Whitehurst & Co 27
Shotter & Co., S. P. 13

### OILS—ANIMAL AND FISH.
Arctic Oil Works. 24
Burrough, F. M. 27
Davis Oil Co. 28
Delano's Sons, Geo. 24
Fairbank & Co., N. K. 24
Macy's Sons, Josiah 24
Nye, Wm. F. 27
Rockhill, C. 25

### OIL—COTTONSEED CAKE, &c.
American Cotton Oil Co. 29
American Oil Co. 26
Boyer & Co., W. H. 28
Brode & Co, F. W., 25
Butcher's Sons Company, W. 26
Duggan, J. H 28
Future City Oil Works. 25
Union Oil Co. 29
Walker, W. & H. 13

### OIL—LINSEED.
Atlantic White Lead & Linseed Oil Co 14
Dean & Co, J. A., 15
Magoffin, W. H. 19
National Linseed Oil Co. 14

### OILS—PETROLEUM.
Acme Oil Co. 61 & 62
Atlantic Refining Co. 41
Beacon Oil Co. 61
Borne, Scrymser & Co. 24
Bush & Denslow Manufacturing Co. 28
Chesapeake Oil Refinery —
Chester Oil Co. 30
Cleveland Petrolatum Co. 2
Consolidated Tank Line Co. 28
Crew, Levick & Co. 28
Delaware Lubricating Oil Refinery 28
Devoe Manufacturing Co. 62
Eagle Refining Co., The 30
Eclipse Lubricating Oil Co, L't'd 61
Empire Refining Co., L't'd. 60
Excelsior Lubricating Co. 28
Galena Oil Works, L't'd. 42
Genesee Oil Works. 2
Ingalls & Co. 28
Martin, Jos. S. 27
Maverick Oil Co 60
McKirgan Oil Co. 61
Meriam & Morgan Paraffine Co. 24
Mix, C. M. 24
National Refining Co. 2
New York Oil Co. —
Peerless Refining Co. 2
Polar Oil Co. 3
Pratt Manufacturing Co. 30
Reed, Hall & Hewlett 25
Signal Oil Works, L't'd. 61
Silliman, Lewis B. 28
Standard Oil Co. 25, 41, 42 & 62
Stuart & Co., D. A. 28
Thompson & Bedford Co. L't'd. 60
Vacuum Oil Co. 43
Vesta Oil Works. 61
Waters Pierce Oil Co. 42

### PAINTS, COLORS, Etc.
Acme White Lead & Color Works. 21
Adler & Sons, S. 18
American Bronze Powder Co 20
Ansbacher & Co., A. B. 18
Baker & Co., R. J. 20
Barnett, James P 18
Belknap's Son, E. S. 64
Billings, Taylor & Co 17
Binney, J. W. 34
Brand, James. 23
Bridgeport Wood Finishing Co. 64
Briggs & Co, John. 14
Budd, J. J 17
Burgess & Newton. 22
Cabot, G L. 16
Canton Paint & Oil Co. 4
Chattanooga Paint Co. 23
Chicago Wood Finishing Co. 4
Clinton Metallic Paint Co. 17
Currey M'f'g Co. 22
Cutter & Co., W. E. 17
Davidson & Knowles Co. 23
Devoe & Co, F. W., 1
Doggett Bros. 19
Finck & Co., J. C. 16
Gabriel & Schall. 17
Government Waterproof Paint Co 21
Gridley & Co 45
Grogan, John L. 23
Hampden Paint & Chemical Co. 19
Harrison Bros. & Co. 11 & 18
Hore, Edward 18
Howell & Co., C. H. 15
Iron City Color Co. —
Leech, Neal & Co. —
Long Island Paint & Color Works. 21
Lucas & Co, John, 16
McCreary & Co., J. A. 4
Marble & Co., Jerome. 64
Marsching & Co., J. 4
Martin & Co, L., 16
Meier & Co, Geo., —
Michigan Carbon Works. 22
Moser & Co, Charles, 16
Nolen & Boardman. 16
Page & Krausse M'f'g & Mining Co. 16
Peart Bros. 17
Peninsular W. L. & Color Works. 17
Pfeiffer & Lavanburg. 19
Price M'f'g. Co., Wm. B. 20
Prince Manufacturing Co 1 & 17
Prince's Metallic Paint Co. —
Reichard, F. A. 18
Rickard & Hewitt. 17
Riley, Jno. H 20
Rutherford & Barclay 17
Siebold, M. 19
Smith & Co, J. Lee, 15
Sondheim, Alsberg & Co. 18
Taintor, H. F. 19
Tiemann & Co., D. F. 18
Truslow & Co. 63
U. S. Gutta Percha Paint Co. 22
Waddell & Co., R. J. 17
Webb & Co., Rob't. 12
Wetherill Co., L't'd, The S. P. 23
Wood's Son & Co., Henry 22
Woolsey Chas. A 19

### PHOSPHATES & FERTILIZERS.
Carr, Robert S. 56
Heller, Hirsh & Co. 55
Taylor, Geo. F 16

### SOAP MAKERS.
Fairbank & Co., N. K. 24
Fels & Co 4

### VARNISHES & VARNISH GUMS.
Adamanta Manufacturing Co 12
Babcock Varnish Co. 14
Billings, Taylor & Co. 17
Crockett Co., D. B. 64
Gilson Asphaltum Co. 64
Glidden & Joy Varnish Co. 20
Hill's Son & Co., Edward 20
Lamson & Bro, John S., 19
Parrott Varnish Co. 64
Pope & Co, W. C. 18
Pratt & Lambert. 21
Rosenberg & Sons, D. —
Smith & Co., Edward 1
U. S. Varnish Co. 4
Valentine & Co. 21
Walker Gum Co. 19
Walker, R. & W. R. 12

### WHITE LEAD.
Anchor White Lead Co. 15
Atlantic White Lead & Linseed Oil Co. 14
Battelle & Renwick, (Ulster W. L Co.) 14
Beymer-Bauman Lead Co. 15
Bradley White lead Co. 15
Brandram Bros & Co. 22
Briggs & Co, John, 14
Brooklyn White Lead Co. 15
Carter White Lead Co. 14
Collier White Lead Co 14
Davidson & Knowles Co. 23
Detroit W. L. Works. 16
Eagle White Lead Co. 20
Jewett White Lead Co. 15
Lewis., & Bros, John T. 15
Maryland White Lead Co. 23
Maxwell White Lead Co. 14
Morley Lead Co., The J. H. 16
Peninsular W. L. & C. Works. 17
Penna. White Lead Co. 14


See Notices page 12.


MARSCHING'S FRENCH GOLD PAINT FOR ORNAMENTAL GILDING.

THIS, BEST OF ALL **Decorative Paints,** Is easily applied on Frames, every variety of woodwork, Metal, Plaster Paris, Leather, etc. Send for price list to J. MARSCHING & Co. 27 Park Place, New York, Importers and Manufac'rs of BRONZE POWDERS, GOLD LEAF, ETC.

J. C. DILWORTH, PROPRIETOR. } WHOLESALE EXCLUSIVELY.
Descriptive Circulars on Application.
Correspondence Solicited.

**EXCELSIOR MFG. CO.,**
**106 Market St. Pittsburgh Pa.**
**Oil, Cellar and Faucet Tanks; Cans, Pumps, Et.**
From 5 to 300 gallons. All sizes kept in stock for
**Grocers and Oil Dealers.**
SYRUP CANS, BUNG PANS, BARREL CAPS, FLOOR PANS.

**B. A. Fahnestock's VERMIFUGE**
*Observe particularly that the initials are* **"B. A."** *thus avoiding imitations.*
1827—B. A. FAHNESTOCK,
1835—B. A. FAHNESTOCK & CO.,
1862—B. A. FAHNESTOCK'S SON & CO. and FAHNESTOCK, HULL & CO., New York.
1869—FAHNESTOCK, HASLETT & SCHWARTZ,
1872—J. E. SCHWARTZ & CO.
*This latter firm being the present*
SOLE PROPRIETORS OF
**B. A. Fahnestock's VERMIFUGE,**
61 4th Ave.,
***PITTSBURGH, PA.***

PRIVATE BRANDS MADE TO ORDER.
Sweetly Perfumed. Elegantly Packed.
**FELS & CO.'S TOILET SOAPS.**
FELS & CO.'S TOILET SOAPS.
FELS & CO.'S TOILET SOAPS.
FELS & CO.'S TOILET SOAPS.
WRITE FOR PRICE LIST. FELS & CO., PHILADELPHIA.

**C. C. PHILLIPS,**
Manufacturer of
**Vertical and Horizontal Mills,**
Portable and Stationary Grinding Mills and Mill Machinery in general, for Paints, Drugs, Phosphates, Bones, &c.
**20 S. Broad St., Philadelphia.**

VAMPIRE BELT OIL — WATER PROOF.
Belts oiled with it will not Slip, Harden, or Crack.
*Sample can FREE, you to pay Expressage.*
SOLE MANUFACTURERS,
**CANTON PAINT & OIL CO., MELROSE, MASS.**

**J. A. McCREARY & CO.,**
**23 So. Charles St., Baltimore, Md.**
MANUFACTURERS ONLY OF
**Spanish Brown, American Venetian Red, Metallic Brown, Lamp Blacks Mortar Colors, Japan Dryer Lightening Dryer, Brown Japan, Carriage, Car and Roof Paints, Lacquers, Etc.**
*CIRCULAR UPON APPLICATION.*
*CORRESPONDENCE SOLICITED.*

ROBT. S. McCORMICK, *President.* P. H. SMITH, JR., ATT'Y, *Manager.*
***Lenox Law & Collection Co.***
**ROOMS 53 & 54, 88 WASHINGTON ST., CHICAGO.**
We respectfully solicit Collections from Bankers, Merchants, Corporations and Individuals. Refer to any Bank in Chicago.
P. H. STANLEY, *Sec'y & Treas.* S. P. McCONNELL, *Attorney.*

**U. S. VARNISH CO.**
Cincinnati, - - Ohio,
Manufacturers of
**Fine Varnishes,**
**JAPANS, Etc., Etc.**
CORRESPONDENCE SOLICITED.

**WOOD FILLERS**
Manufactured by
**Chicago Wood Finishing Co.,**
259 & 261 Elston Ave., CHICAGO, ILL.
We make all colors in "Antique" and "Natural" Wood Fillers, Stains, Primers, Rough Stuff, Furniture Polish, etc.

**B. L. FAHNESTOCK'S VERMIFUGE**
—FOR—
**EXPORT AND HOME TRADE.**
B. S. FAHNESTOCK
*SOLE PROPRIETOR,*
**Pittsburgh, Pa.**

**MORT. LIDDELL & CO.** Widnes ENGLAND
SKULL BRAND
**CAUSTIC SODA.**
Registered.

## Oil, Paint and Drug Reporter.

EMBRACING THE
DRUG, PAINT AND OIL TRADE, NEW YORK DRUG BULLETIN, NEW YORK DRUGGISTS' PRICE CURRENT, SOAP-MAKERS' JOURNAL, OIL AND PAINT REVIEW, and WEEKLY DRUG NEWS.

OIL, PAINT & DRUG PUBLISHING. CO., Proprietors.
FRANKLIN H. TINKER, Treas. & Manager.
W. B. TEMPLETON, Secretary.

PUBLISHED EVERY WEDNESDAY at 72 William street, New York.

### SUBSCRIPTION RATE.

One year, including postage.....$6.00.
If paid in advance.....$4.00.
To all foreign countries, including postage.....$6.00.

### ADVERTISING RATES.

TERMS: PAYABLE QUARTERLY IN ADVANCE.
Less than one inch, 25 cents per Agate line each insertion.

| | |
|---|---|
| 1 inch (14 lines), one insertion | $2.00 |
| 2 inches, one insertion | 4.00 |
| 3 " " " | 5.50 |
| 4 " " " | 7.00 |
| 5 " " " | 8.25 |
| 6 " " " | 9.75 |
| 7 " (¼ column or ⅛ page) one insertion | 11.00 |
| 8 inches, one insertion | 12.25 |
| 9 " " " | 13.50 |
| 10 " " " | 14.75 |
| 11 " " " | 16.00 |
| 12 " " " | 17.25 |
| 13 " " " | 18.50 |
| 14 " (1 column or ¼ page) one insertion | 19.75 |

**Subject to following Discounts.**

| | Per ct. from above rates. |
|---|---|
| On 2, 3 or 4 insertions | 30 |
| " 5 to 12 " | 40 |
| " 13 " | 45 |
| " 26 " | 50 |
| " 52 " | 60 |

LARGER SPACES, NET.

| | 1 t. | 2 t. | 3 t. | 4 t. | 13 t. | 26 t. | 52 t. |
|---|---|---|---|---|---|---|---|
| One page.. | $50 | $90 | $125 | $160 | $475 | $800 | $1400 |
| Half page. | 30 | 54 | 75 | 95 | 275 | 450 | 750 |

First page, $75 per inch per year, net. Last page, $60 per inch per year, net. Other special positions at special prices.

JOHN F. RIDAY,
GENERAL MANAGER ADVERTISING DEP'T

**No order given to any agent or representative of this paper becomes binding until approved by the Company.**

WEDNESDAY, SEPT. 5, 1888.


### LEADING TOPICS THIS WEEK.


Tariff Prospects Discussed.
Review of the Cotton Oil Season.
Cause of the Advance in Shellac.
Cottonseed Lard now on the Market.
Sequel to the Scotch Oats Essence Fraud.
The Situation in Cloves and Clove Oil.
The Car-load Freight Questjon.
No Favors to Opium Smugglers.
Congressional Mistakes in Discussing Lard.
The Wholesale Druggists Association.
Preparations for a National Paint Association.
Report of U. S. Consul on American Lard.
The Rise and Power of Caffeine.
Adulteration of Condiments.
Report of U. S. Consul on Olive Oil Adulterations.
Oil-carrying Steamers.
German Chemical Industry.
Cinchona Culture in Java.
Situation of Petroleum.

**For Complete Table of Contents see page 33.**


### WEEKLY REVIEW.

Money, though not quotably higher on call, is a trifle stiffer, owing to the demand for funds from the West. Call loans rate at 1½@2%. Time money is not in demand, though 4½ is reported bid for six months' loans, with the asked rate firmly held at 5%. Shorter dates are, however, shaded down a little. The supply of commercial paper is moderate and the demand is fair. We quote 60 to 90 days' indorsed bills receivable at 4½@5%, first-class four months' commission house names at 5@5¼%, and good single names—jobbers—having four to six months to run at 5½@6½%. Following are the rates of exchange on New York: Savannah, buying ¼ discount, selling ⅜ discount to par, Charleston, buying par, selling ⅛ premium. New Orleans commercial, 50c per $1,000 premium, bank $1 premium. St. Louis, 60c per $1,000 discount. Chicago, 60c per $1,000 discount. Sterling exchange is inactive, but steady.

| | |
|---|---|
| Sterling, 60 days, nominal | $4 85½@ |
| sight, nominal | 4 88½@ |
| 60 days, actual | 4 84¾@4 85 |
| sight, actual | 4 87½@4 87¾ |
| Cable transfers | 4 88¼@4 88½ |
| Commercial, 60 days | 4 83½@4 84 |
| Paris, 60 days | 5 22½@5 21⅞ |
| sight | 5 20⅝@5 20 |
| com., 60 days | 5 24⅜@5 23¾ |
| com., sight | 5 21⅞@5 21¼ |
| Antwerp, 60 days | 5 25 @5 24⅝ |
| Swiss, 60 days | 5 23¼@5 22½ |
| sight | 5 20⅝@5 20 |
| Reich marks (4) 60 days | 94¾@94⅞ |
| (4) sight | 95⅛@95¼ |
| (4) nom., 60 days | 94⅛@94⅝ |
| (4) com., sight | 94⅞@95 |
| Guilders, 60 days | 40⅛@40 3-16 |
| sight | 40 5-16@40⅜ |
| com., 60 days | 39 15-16@40 |
| com., sight | 40⅛@40 3-16 |
| Copenhagen, Stockholm and Christana, Kr ona, 60 days | 26⅝@26 11-16 |
| sight | 26⅞@26 15-16 |

### TARIFF PROSPECTS.

The Senate Finance Committee is still engaged on the tariff bill and the sub-committee having the preparation of the bill under its special care now announces that parties who wish a hearing before the Sub-Committee on Tariff must make their appearance within the first ten days of the present month. The hearings by the sub-committee began on May 26th and have continued almost daily since, information being sought from every possible source. It would appear from the announcement of the limitation of the time for further hearings that the bill is drawing near completion, and it is stated that the sub-committee will report to the Finance Committee at the end of the time stated, and that the latter will make its elaborate report to the Senate next week. Nothing further has been learned regarding the provisions of the bill, but as it is hardly probable that the bill will become a law, we can await with becoming patience the report of the committee. From the manœuvers of the politicians in and out of Congress, however, it becomes more and more apparent that tariff legislation will have to depend upon political exigencies. Party leaders regard it as a political measure and are disposed to modify the bills in any manner to affect the popular vote. The interests of the merchant, the manufacturer, the producer, are lost sight of in the exciting contest to secure votes. It is unfortunate that tariff revision was attempted at a time when the matter could be made an important party issue. Better far let the whole matter go over until next year. But this neither party would be willing to do, or if willing, dare to propose.

### CLOSE OF THE COTTON OIL SEASON.

This week ushers in another season of the cotton oil industry, and preparations have been completed for conducting the heaviest business ever known since the first oil mill was built. The season just closed has been remarkably successful, from the fact that the consumption of all cottonseed products was the largest on record, and this has been made possible by the changed conditions of trade which were found to be so necessary to prevent a decline of the industry. Additional increase in the demand for oil, cake, meal, stearine and soap stock has been anticipated by the construction of mills, enlargement of others, and making improvements generally in the various plants. The different properties in the South are in first-class order and ready for active operations, which is an agreeable departure from the custom of previous years, when the meagre profits would not allow of heavy expenses in improvements, as experienced by some crushers last season, who ceased operations rather than continue under a great disadvantage. If all the mills worked to their fullest capacity, the production would be excessive, but it is the policy to keep a number in reserve, either to take the place of others meeting with accidents or to satisfy an increased demand for cottonseed products, so that the trade is prepared to meet any emergency.

Last June we published some figures on the result of the season's work, and they have since been compiled up to the present time, making an excellent showing of the amount of business done. The total crush of seed reached 800,000 tons, which is about 250,000 tons in excess of any previous year. The average yield of oil being thirty-seven gallons per ton of seed, the total production of oil from all sources would amount to 28,800,000 gallons, or 576,000 barrels, counting fifty gallons to the barrel. This vast quantity of cotton oil has received a wide distribution, and hardly sufficient remains to supply wants until new crop oil is on the market. Other evidence is not necessary to confirm the repeated statements of the REPORTER as to the advancing popularity of this wholesome vegetable product. Exports from New York aggregated 54,839 barrels, in comparison with 39,648 barrels last season, while New Orleans sent abroad 31,234 barrels against 30,114 barrels in 1886-87, which make the combined increase for this season 16,311 barrels, without taking into consideration the shipments from Philadelphia and other ports, the figures of which are not at hand. Nearly all the principal foreign countries have added to their wants, especially Belgium, Austria, France, Germany, Spain, and the Netherlands. Even Italy continues to import American oil on a large scale notwithstanding its strict tariff regulations, and has only fallen behind to the extent of 162 barrels during the season. Orders from England have decreased, but the deficiency from that source is more than counter-balanced by the large demand for cottonseed soap stock, which seems to have the preference in that country.

### THE ADVANCE IN SHELLAC.

As forshadowed in our issue of the 19th ult., there has been a decided and importent improvement in the price of shellac. In some grades the advance amounts to fully three cents per pound and the present indications favor still higher figures. The position of the article has been materially strengthened within the past week by the fact that consumers are displaying marked interest. They had been almost indifferent to the impending change and even after the market began to advance were chary of buying except when forced by the actual contingencies of consumption. Latterly, however, they have been buying on a liberal scale, and their purchases in connection with the heavy transactions between dealers have resulted in a close concentration of the available supplies.

The leading mark, D. C., is more tied up than any of the others, with the possible exception of Diamond I. The available supply of the first named grade, in a free state, is very light, and one dealer having the bulk of it is in a position to dictate prices; and curiously since it advanced it has been in active request, whereas, when the difference in price between it and other marks was less it was neglected in favor of the cheaper kinds. As there is no more of the D. C. mark to arrive here before next February, it promises to command extreme prices on the spot, in the interim.

As usual the upward movement started in London where the very favorable showing of the statistical returns at the beginning of August awakened the dormant speculative interest in shellac, which developed into a heavy buying movement, extending to both distributing and consuming branches, although it would appear from the advices at hand that the bulk of the London transactions have been on speculative account. Our market was slow to respond to the improvement at first, as repeated failures in the past to improve the tone of the foreign markets had to a large extent destroyed confidence in the article on this side. Since, however, the stability of the advance in London and Calcutta is reasonably assured, the feeling here has changed quickly and the tone of our market is now more nearly in accord with the tenor of foreign advices.

### COTTONSEED LARD.

Several months ago the REPORTER intimated that a new cottonseed product would be placed upon the market, as a result of the congressional investigation of the lard industry. The revolting testimony given before the special committee relative to the composition of hog's lard, disgusted consumers of this cooking necessity and removed the prejudice from cotton oil as an article of food. The latter received such high praise from chemists and experts generally on account of its wholesomeness, that it caused an entire revolution in public opinion, as is evidenced by the remarkable increase in the sale of cotton oil this season and the efforts made to satisfy the wants thus created. The congressional committee which declined to legislate against legitimate trade interests after a thorough and intelligent review of the subject, should receive credit for its just, impartial treatment of an industry that has experienced many vicissitudes in the past, but rapidly advanced during recent years and promises to exceed all expectations in the future. Its staple product will henceforth find a preference in the households of the world under the name of cottonseed lard and be sold on its own merits without fear of competition, charges of adulteration, or Government regulations. The cottonseed lard of to-day is not a disguised substitute, as all the labels contain the word "cottonseed" and consumers know what they are buying. There is no occasion for deception, as manufacturers consider it a valuable trademark, and will exert every effort to extend the popularity of their product under its true name. It is composed simply of the highest grade of yellow cotton oil and the pure fat of beef, being absolutely free from the fat of swine.

Had this action been taken five years ago, cotton oil would have been the foundation of probably the greatest industry in existence which it promises to be in the near future, but time will be required to wear off the edges of ungrounded prejudice which impeded its progress previously. However, a proper presentation of indisputable facts and a fair trial, will accomplish what is required, and that program will be faithfully followed until the desired results are attained.

### A SEQUEL TO THE SCOTCH OATS ESSENCE FRAUD.

The adage that "a man is known by the company he keeps," has a practical exemplification in the recent arrest, for improper use of the mails, of one of the chemists who testified to the harmlessness and efficiency of that most iniquitous of vile nostrums, Scotch Oats Essence. It will be remembered by our readers that when the true nature of this compound was exposed through the efforts of the *Druggists Circular*, supplemented by the REPORTER, the scoundrelly manufacturers employed a number of analytical chemists to refute the statements of the eminent analysts who discovered the presence of dangerous quantities of morphine and alcohol in the stuff. As the analyses made by the chemists employed by the oats essence company showed that the nostrum contained no morphine, it was but just to assume that the analysts were incompetent or had examined samples made after the exposure had compelled the manufacturers to abandon the use of morphine. It is questionable whether the reputation of a chemist would be injured more by proved incompetence than by proved negligence, and no doubt most of analysts who allowed themselves to be made the tools of these unprincipalled adventurers have since regretted their connection with the affair.

Among these chemists was one W. H. Morse, M. D., who was particularly earnest in the defense of Scotch Oats Essence, certifying at great length that it was free from morphine, and was a very harmless compound. As intimated in former discussions of this disreputabie matter, reasons for questioning the good faith of this alleged chemist existed, but we were scarcely prepared for the disclosures that have been made regarding his ability as an

analyst and his character as a man.

Some time since our esteemed contemporary, the *Druggists Circular*, received a communication from a Vermont subscriber, who is a manufacturer of a specialty in the perfumery line, enclosing a letter and a certificate from Morse. The latter set forth that the oil of Florida water, made by the Vermont manufacturer, would produce without special apparatus "an article of Florida water the equal, if not the superior, of anything that can be procured in the market, either domestic or imported;" and extolled its value to consumers in extravagant terms. The letter called attention to the "certificate," which was offered for ten dollars, if satisfactory, and suggested that it might be made more valuable by "changes or corrections." If retained, the manufacturer was authorized to use the "certificate" in such form as might best promote his interests. At the instance of the *Circular*, the manufacturer entered into a correspondence with Morse, for the ostensible purpose of furnishing him with the "changes and corrections," but specifically to draw him out and get him to commit himself. This was done so adroitly that in a few weeks enough evidence was adduced to prove that Morse is as great an adept in rascality as his erstwhile employers, the Scotch Oats Essence imposters.

This correspondence, copies of which are now before us, show to what depths some men will descend in the prostitution of their calling for mere pecuniary gain, and is a striking commentary upon the value of the analyses of Scotch Oats Essence made in the interests of the infamous manufacturers. Above all it proves that in addition to being a knave, Morse is a fool in measuring all men by his owu standard of honor. His rascality is only equalled by his ignorance of the first principles of analytical chemistry, which is amply displayed in the alleged certificate he furnished on the order of the Vermont manufacturer. To his request for suggestions to aid him in drawing up his "certificate," the manufacturer sent Morse a bottle of bay oil, labelled "Oil of Florida Water," and this the "chemist" claimed to have analyzed with the following result: That it consisted of a solution of the essential oils in alcohol, in a high degree of purity, a thorough blending of the ingredients occurring; it was well and scientifically made by a lengthy process; the oils noted were those "which are basic of the best Florida water;" its specific gravity was 0.887 at 68° F.; it was unsophisticated, strongly levogyrate; had the characteristic aromatic burning taste, and the Florida water made from it was equal to any in the market, particular reference being made to several well known brands; while the ease with which Florida water could be made from it, the richness of product, fresh and sparkling delicacy, and economy of time and money were cited as special recommendations. As it is as easy to make Florida water from bay oil as to convert a sow's ear into a silk purse, the peculiar value of this "certificate" will be apparent at a glance; it should certainly be worth more than the paltry sum of twenty-five dollars demanded by its author. Morse, when arrested, admitted the genuineness of the correspondence with the Vermont manufacturer, and claimed that he had made an analysis of the alleged oil of Florida water. He had no laboratory at his home in New Jersey, and admitted that his claim to having one in New York was untrue. He is now under bail awaiting examination on the charge of making fraudulent use of the mails.

After this exposure of one of their coadjutors in the Scotch Oats Essence business, the remaining chemists who testified to the harmlessness of the compound might well feel fearful of their reputations. It should at least teach them and all other analysts that more than a superficial examination of the facts connected with the history of any substance they are asked to analyze is a matter of first importance, to the end that they may avoid the danger of falling into error or of lending the weight of their names and knowledge to the support of fraud. The trade will learn that too much credence should not be given to the certificates of analysis of comparatively obscure chemists, and above all if any doubts of their accuracy have been heretofore entertained, it must now be admitted that the results of the tests showing morphine and alcohol in Scotch Oats Essence were absolutely correct.

## CLOVES AND CLOVE OIL.

Since the beginning of the year there has been an almost continuous decline in the price of Zanzibar cloves, starting in at twenty-one cents and ending a few days since at fourteen cents. The reaction which has taken place within the past week has carried prices up about two cents per pound—not much of an advance compared with the total shrinkage since the market began to decline, but enough, in view of attending circumstances, to encourage the belief among holders that the period of depression is at an end, and that the market will go much higher. There are some skeptics to this view, who base their arguments upon the assumption that the present improvement will bring out stocks that have been held back while the market had a downward tendency, and that such offerings must precipitate a decline. It does not follow that these bearish ideas will be borne out, for it is conceded that the bulk of the reserved stock is under strong control, and since it has been held so long, no necessity exists why it should be slaughtered now.

The chief elements of strength in the market are the small available spot supplies and the decided advance in futures. Then, too, the season of largest consumption is at hand and the demand for several weeks to come should be sufficient to absorb the supply even at higher prices, providing the shipments from the other side are not as heavy as they were last season, and the owners of the stock now held off the market are not induced to release it until the market has recovered something of its normal tone. Regarding the prospects of future supplies the advices from the primary sources are yet too meagre to form the basis of an intelligent opinion. In some quarters it is held that the crop will be a short one, though upon what reasonable ground such an opinion may be formed does not appear. Neither have we been able to ascertain how those who predict a large crop are warranted in their assumption. We are forced to the conclusion that all predictions regarding future supplies are the result of guesswork or an imperfect knowledge obtained from the meagre and unsatisfactory accounts so far received here.

The upward tendency of the market for the spice has checked the downward movement in clove oil values, and within the past few days there has been a marked advance accompanied by active buying for consumption, which has materially lessened the available supply. The market for the oil is still irregular and values can hardly be said to rest on a secure basis. The reason for this is that some of the oil manufacturers have been caught short of supplies of raw material by the sudden advance in cloves and hope by keeping the market down to buy in enough oil to carry them over the tight place in which they find themselves through their own short-sightedness or through circumstances beyond their control. Should the upward tendency of the spice market be further developed, or, even should the present prices for cloves be maintained the price of oil must of necessity go higher.

## THE CAR-LOAD LOT QUESTION.

The three cases of complaint brought by the New York Board of Trade and Transportation, and two prominent firms of merchants in this city, against the trunk line railroads, have at length been submitted to the Inter-State Commerce Commission, and a decision may be looked for at an early day. The plaintiffs have caused their Brief, submitted to the Commission, to be printed and have circulated copies wherever it is thought they may influence public, and especially press opinion. On the cover of the Brief is printed a paragraph, as a sort of preface, which gives the complainants' reasons for printing and circulating the same, and says "Its decision will involve important principles, and is fraught with far-reaching consequences to a very considerable portion of the community." This is true. They should have stated further that it is fraught with dangerous consequences to a still greater portion of the community. The complainants' statement of their case in brief is given on another page and will be found to make a strong argument in favor of interference by the Commission, but the fact should not be lost sight of that this is but one side of the question, and the figures given of cost of transporting the two classes of freight may not be entirely accurate, to say the least. That the railroads have, in instances, exacted a difference in the rates between the two classes of freight out of all proportion to the difference in cost of transportation, must be admitted, and some means to check this evil should be devised, but we question the ability of the Inter-State Commerce Commission to adjust this matter satisfactorily and equitably on even a small proportion of the roads, and have grave doubts about the wisdom of an attempt to do so. If it is just to say to the railroads "as it costs you but one cent per barrrel more to transport less than car-load lots your tariff for smaller than car-load lots shall not exceed one cent per barrel above the car-load rate," then it would be equally just to say to the plaintiffs, who make large discriminations in favor of large buyers—as will be seen by reference to their price lists—"as it costs you but one-quarter cent per pound more to sell in small quantity than in ten barrels or ten cases lots, you should not exceed that difference in selling small quantities." In the price list of one of the complainants there is a difference of fifteen per cent. in the price of an article in large or small quantities, where the cost of handling could not possibly be increased to the extent of one per cent. if sold in the smaller quantity. We do not take exception to the practice, though we find that the class of merchants to which the complainants belong are apt to make the difference in price on large and small lots unreasonably great. It is a custom of the trades. But these complainants should be willing to allow others a fair measure of the privilege they themselves enjoy. As this movement, however, is supposed to be in the nature of reform, by all means let us have it, but let it be just and not exact from the railroads service that will entail a loss. Assuming that the difference in cost of the two classes of freight as given by the complainants is correct as regards one railroad, it may be entirely too small in the case of another, and a rate of difference between the two classes of freight prescribed by the Commission, or by any other authority, would be unjust to one road while another would find it extremely profitable. Possibly a remedy for the existing evils of excessive differences could be found in a court specially constituted to try causes of complaint of this character, with power to compel restoration of overcharges and exact costs from the offending railroads.

## NO FAVORS TO SMUGGLERS.

Gardiner, the opium smuggler, who was recently arrested in Chicago in the act of disposing of some of the contraband drug, appears to be on very intimate terms with the Government officials who have him in charge, and this has given rise to the belief that he is either a Government detective or has determined to turn informer. The former view can hardly be substantiated by the facts, but it is within the range of possibility that a wholesome regard for his own welfare would induce him to sacrifice his confederates in crime. The intimacy and good feeling which is said to exist between Gardiner and the United States officers may be accounted for in part by the fact that he was once one of their number, but there is an ugly suspicion, in view of the ease with which apprehended smugglers have been permitted to escape from their captors, and the whitewashing trials that have taken place, that a closer bond exists between the smugglers and some of the Government officials than that of mere sympathy on the part of the latter in the misfortunes of the former. It is to be hoped that the arrest of Gardiner will result in the breaking up of the opium smuggling ring; but if this desirable end is to be attained, it would appear that a more faithful discharge of their duties is required of the Customs officials, and the Government should insist that this requirement be met or summarily remove the delinquent officers.

## CONGRESSIONAL BOMBAST.

There are a few members of Congress who continue to parade their views on the exhausted lard question, but no harm would result if their remarks and statistics were confined to facts, which is not always the case. For instance, Representative Laird, of the House Agriculture Committee, aired his opinion last week in favor of legislation to provide for inspection of food products designed for exportation, and claimed that it is due to sympathy with the general feeling in Europe that American food products are unsafe, owing to a want of authoritative care in their preparation; that a decrease in 1887 of over 53,000,000 pounds in the lard exported occurred, without knowledge of or reference to any general system of adulteration of that commodity, and that since the investigation of the matter by the present Congress, Denmark, which in 1887 purchased over 16,000,000 pounds of American lard, had closed her ports to this product, excepting, however, it is said, the "refined" portion.

If the statistical reports of the Government are consulted, it will be found that the exports of lard in 1887 were largely in excess of the previous year, the official figures being 321,533,746 pounds for 1887, against 293,728,019 pounds for 1886. As the congressman makes an important blunder in his comparison, the other statements may be founded on the same basis, resulting in the formation of an erroneous opinion among those of his colleagues who are satisfied to accept them without confirmation. The point made regarding Denmark may be likewise disputed, but the allegation that "refined" lard has not been boycotted is favorable to lard compounds as they are refined products. Mr. Laird evidently desired to heap odium on the compounds, but like similar attempts of vindictive law makers, he is never so accurate but what flaws can be found in his apparently biased statements. There is no necessity for alarming the trade on diaphanous pretexts, and much of the discussion could well be dispensed with.

## TRADE ITEMS.

Mr. B. S. Fahnesteck, of Pittsburg, is in the city on business.

Mr. Leonard Richardson, of C. T. Raynolds & Co., is summering at Martha's Vineyard.

The Phœnix Glass Works in Phillipsburg, Pa., ceased operations last week on account of a strike in which 300 men are interested.

Mr. F. W. Devoe is spending his vacation in the White mountains in the hope of getting relief from his annual attack of hay fever.

A cablegram from Hamburg reports the destruction by fire of several warehouses containing saltpeter and other articles valued at $7,000,000.

The Davy Chemical Works of St. Louis have added a department of fine chemicals to their business since removing to the new building at 121 Locust street.

Mr. James B. Walters representing the Bridgeport Wood Finishing Co. of New Milford, Conn., has started east for a trip through the Middle Atlantic States.

Mr. W. W. Lawrence, the color manufacturer of Pittsburg, has been in the city several days and will sail on the City of Rome tomorrow for an extended European trip.

Gen'l Horatio C. King has suggested the name of Mr. William Steinway, who is identified with the dyestuffs trade, for Mayor of New York City, if Mr. Hewitt is nominated for Governor.

Negotiations between the great Cheshire Salt Trust and the owners of the Cheshire salt fields are said to be proceeding satisfactorily. It is believed that nearly all the properties will be sold to the new company.

A large outcrop of plumbago has been found by a local mineralogist between the towns of Adams and Savoy, Mass. The output is nearly on top of Florida Mountain range, and is reported extensive and free from alloy.

Henry M. Goebel, a dealer in paints, oils, &c., who has several stores in Grand Rapids, Mich., one in Kalamazoo and one in Battle Creek, assigned on Friday to Harvey Joslin, of Grand Rapids. His liabilities are $40,000; assets $60,000.

Citizens in Sandwich, Mass., have purchased a considerable amount of stock of the Boston and Sandwich Glass Company, which recently shut down indefinitely, with the intention of starting up the works as soon as the necessary preliminaries are arranged.

At Malden, Mass., Sept. 1, one of the buildings of the turkey red works of John Cadman, Jr., used for offices and designing rooms and a storage room for carpets, was burned. All the patterns and designs, the office furniture and many valuable papers were destroyed. Loss about $3,500.

A receiver has been appointed for the Challenge Refrigerator Manufacturing Company at Cincinnati. The concern was not incorporated, but was a partnership composed of H. M. Diggins, Jr., and Henry Varzig. In December last Mr. Varzig claimed a net worth of $158,000, with total liabilities of $23,500.

Mr. E.T. Bedford of the Thompson & Bedford Co., limited, has been elected president and C. M. Pratt treasurer of the Globe Powder Co., incorporated last week in New Jersey with works in Tompton, N. J. Mr. Bedford is also president of the American Supply Co., the selling agents for the powder company.

The Glidden & Joy Varnish Company, of Cleveland, Ohio, whose goods are favorably known, have opened a branch office in London, England, which gives them a great advantage in the selection of fine African and New Zealand varnish gums at first cost. The agency in London will also push the sale of their varnishes in England and France.

The C. D. Smith Drug Co. has taken out a permit for a new building at the corner of Third and Messanie streets, St. Joseph, Mo. The new house will be 60 by 140, six stories high and cost $75,000, and built of pressed brick, with terra cotta trimmings. The house will be built especially for a wholesale drug house, and will have all the conveniences and requisites for safety.

An extensive fire in Baltimore on Sunday destroyed the wholesale drug house of J. H. Winkelmann & Co., entailing an estimated loss of $70,000 on stock, which is partly covered by insurance. The paint house of Hirschberg, Hollander & Co., also succumbed to the flames, causing $50,000 damage to the stock, but is partly insured. The latter firm had two buildings filled with window glass and varnish, and also a store on the northwest corner of Sharp and Hanover streets.

Clara Rozentein, of this city, brought over from Germany some months ago several hundred cases of matches, and the custom house officers charged her over $300 as duties on the boxes containing the matches. Mrs. Rozentein protested that this was unfair and brought suit for the recovery of her money in the United States Circuit Court, and last week a decision was rendered granting her $407 90 as indemnity. This is the first verdict that has ever been recovered against Collector Magone in a United States court.

Messrs. Dodge & Olcott prepared a fine assortment of Mexican vanilla beans last week as a loan exhibit to a customer who is having a display of goods at the Pharmaceutical Exhibition in Detroit. The assortment includes specimens of the different crops from 1881 to the present season, including samples as they were taken from the trees, others partly and fully cured, and flowers preserved in alcohol of the 1889 crop which matures in December and will not be placed on the market until next July. The beans are from the curing establishment of Messrs. Dodge & Olcott in Mexico.

According to the Cologne Chamber of Commerce the manufacture of perfumery in Germany underwent a severe crisis in 1887. The export to Austria, Roumania and Italy has been brought almost to a complete standstil by the increased dues of these countries. The sales which were formerly very large have almost entirely ceased, so that a very considerable decline has taken place in the trade generally. Alone the trade with North America has improved somewhat as compared with 1886. That the Austrian market is lost for Eau de Cologne in particular is proved by a cursory visit to the Bohemian frontier towns where genuine Eau de Cologne is on account of the heavy dues either not sold at all or only kept by the shopkeepers as an article of unusual luxury.

Acting Commissioner of Internal Revenue Henderson has prepared a statement of the per capita consumption of whiskey, beer, etc., at the present day as compared with the consumption per capita forty-seven years ago, before the enactment of the internal revenue laws imposing a tax on the sale. It shows that the consumption per capita during the year ended June 30, 1840, to be as follows: Distilled spirits, 2·52 proof gallons; wines, 0·29 gallons; malt liquors, 1·36 gallons; making a total of all wines and liquors of 4·17 gallons. Since then there has been a steady diminution in the per capita consumption of distilled spirits, and a corresponding increase in the consumption of malt liquors. The per capita consumption during the year ended June 30, 1887, was as follows: Distilled spirits, 1·19 gallons; wines, 0·54 gallons; malt liquors, 11·98 gallons, making a total of 13·68 gallons.

## PETROLEUM NOTES.

Findlay, O., has forty natural gas wells.

Dunreith, Ind., will have gas by October 1st.

Natural gas has been struck near Rome, Ga.

The report comes from Philadelphia that a large refinery is to be erected at Point Breeze.

The San Francisco authorities are considering an ordinance requiring fuel petroleum to stand a 90° flash test.

Kempton, Ind., has a strong gas well. The gas will be piped to Frankfort, thirteen miles distant.

The Pine Run Gas Company has completed a strong gas well about five miles north of Murraysville, Pa., at a depth of 1,500 feet.

Omaha expects to be supplied with oil from the Wyoming fields before two years, just as the stuff is now being piped from Lima, O., to Chicago, nearly 300 miles.

The Southwest Natural Gas Company is offering free gas to new consumers until October 1st, after which date the rates will be twenty-five cents per fire a month.

In the Macksburg district there were twelve wells completed in August, five of which were dry, and 40 bbls new production. Five wells are drilling and two rigs up.

The Minnesota Natural Gas Company asks for an exclusive franchise to do business in St. Paul. It proposes to pipe gas from Albert Lea, where a deep well is now being sunk.

Natural gas well No. 4, of the collection which is to supply Wabash, Ind., has been shot with sixty quarts of nitro-glycerine. The daily output is said to be 10,000,000 feet.

It is reported that the Cincinnati Oil Fuel Company has made an assignment. It was incorporated December 9, 1887, with an authorized capital stock of $150,000, but only $9,000 was paid in.

A report from Indianapolis, Ind., says the Portland Gas Company has commenced laying pipes to its wells at Camden, eight miles from Portland, where it has 10,000,000 feet ready to turn on.

The roaring gas well back of Canonsburg, Pa., is said to have the greatest registered pressure of any in the world. The gas looks like a solid piece of blue steel for some distance after it comes out of the pipe. Solid masonry 12 feet thick surrounds the well to hold the cap on.

At the convention of the American Electric Light Association, held in this city last week, a paper was presented on "Petroleum as a Fuel," by S. S. Leonard, president of the Electric Light Company of Minneapolis, Minn. The convention was startled by the statements made in this paper, that by the use of petroleum instead of coal for fuel in running electric light machinery 25 per cent was saved in fuel and 50 per cent in labor.

An exchange asks why it would not be a good rule to have a small bag of oil placed in ships' boats, while at sea, so that if crew or passengers have to take to the boats in case of accidents, there will be ready some oil to calm the seas and thus prevent the swamping of the boats. A boat load of people may get away from a sinking ship only to be upset because it is too difficult to keep the boat's head to the seas, or because it is impossible to prevent heavy waves from engulfing the craft. A little oil poured over the bows might in such cases prevent the sinking of the boat.

The largest gas well in Allegheny county was struck a few days since on the farm of John M. Allison in Richland township and just about a mile southeast of Bakerstown. It is said to be fully equal to the McGugan well in Washington county or the largest of the Murraysville wells. It has not yet been lighted or piped and its roaring can be heard for eight or ten miles. A blue column of gas extending about fifteen feet above the mouth of the well and early in the morning can be traced to the top of the derick. The gas was struck at the depth of 1,000 feet.

The Secretary of the Treasury has received a report from Captain D. B. Hodgson, commanding the revenue cutter Chase, which has just returned to Gardiner's Bay, New York, from a cruise with the cadets to Spain. He says that after leaving Faval, Azores, July 24, he encountered head winds and two gales, the last on the 21st inst., to the southeast of Gregor Shoals, being of a cyclonic nature, accompanied by a very high sea. The vessel, he says, had to be hove to for several hours in both cases. She rode the waves admirably without shipping a perticle of water. This was due, he says, to small quantities of oil in bags hung from the weather cathead.

We learn from an authoritative quarter that a very strong demand has lately displayed itself for hard paraffine, so that rapid improvement in the at present very depressed prices may be confidently looked for. Soft paraffine is no more to be found among the stocks of the factories, but only in the hands of dealers among whom there is a very sharp competition. Solar oils are firm and their situation is likely to improve in consequence of the rise of the Russian rouble which has brought about an increase in the value of Russian petroleum. Generally speaking, there is a distinctly fresher and firmer tone noticeable in the paraffine and solar oil industry.—*Kuhlow's Review.*

At an early hour Saturday morning, one of the 35,000 bbl tanks at Oil Centre, Wood Co., O., gave way while two men were engaged in calking it. The oil took fire from a forge 300 feet away, and John Mulnix of Cleveland, and Burton Weirick of Oil Centre, were burned to death. Mulnix was holding the bottom of a ladder while a man was on the ladder calking a rivet near the top. The flood of oil carried the man who was on top of the ladder away to a place of safety, but Mulnix and Weirich, the latter being near the tank at the time, but not working on it, were burned to death. The tank was a new one, and contained about 20,000 bbls of oil. The system of protection confined the loss of oil to the collapsed tank, although there are other tanks on all sides of it 300 feet distant.

On Saturday morning, Mr. Miller, foreman for the Anchor Oil Company, was severely burned about the hands and face by an explosion of gas. The accident occurred at No. 5 well. They had broken connections to do some work and the gas escaped in the derrick, settling on the ground about the rig, and Miller didn't detect its presence. He was standing by the pitman, about half way between the derrick and engine-house, when he lit his pipe to have a smoke, he threw the match away, which was still ablaze when it struck the ground, then the explosion occurred, the fire ran back to the casing head. There was no water about, and then Miller jumped in and with his bare hands smothered the fire and saved the rig.

## CHICAGO LETTER.

Special correspondence of the REPORTER.

CHICAGO, Sept. 1, 1888.

Firmness, short stocks and an active inquiry although for small lots, have been the prominent features of this week's market in linseed oil. There has been no advance, and, with absolute quiet on the part of the "disturbing elements," it is difficult to conceive of any rational cause for a decline. With not more than 33½ per cent of the mills in actual operation, and a demand more than sufficient to absorb the output, the prospect of an immediate decline, would seem, naturally, to be more shadowy than substantial. The key to the existing condition of affairs may, perhaps, be found by a comparison of some admitted facts: in the first place, there were no stocks carried over into the present crop year by either crushers or dealers, a state of things unexampled during many antecedent years. In the second place, arrivals of seed have hitherto fallen so far below expectations that producers find it difficult to obtain the crude material in sufficient quantities to enable them to meet the demand. Dealers who, while destitute of stocks, find themselves confronted with the prospect of a reasonably brisk trade. These circumstances may be said to comprise the operative causes and as they are two-fold in their nature, so also are the results. There exists a pressing demand to supply immediate wants, and the activity of the inquiry has apparently stimulated a disposition on the part of some of the closed mills to buy seed. In view of the fact that from 65@80 per cent of the seed arriving here is being delivered on contract, and that offerings in consequence are necessarily very light, an appreciation of quotations (joined to a firm feeling) in the flax market can hardly excite surprise.

As regards the demand, there are two things to be said. While it is for the most part substantially of a hand-to-mouth character, it is nearly double that of the capacity of the presses now running, and for the first time in many years consumers find themselves compelled to "wait their turn" in the filling of orders.

Dealers, however, are still timorous, and while they universally admit the probability that September oil will be held firmly at present figures, there seems to be a general belief that prices will be lower in October. And this, too, notwithstanding the fact that they are confronted to-day by empty tanks, which they are compelled partially to fill with oil at a time when the market may be said to be extraordinarily firm at the highest price of the year.

Western crushers smile sardonically when speaking of eastern markets, in view of cheaper rates of transportation than formerly prevailed they are disposed to call quotations at 49c in Philadelphia, 50c in New York, and 51c in Boston about normal figures, when considered in relation to the western market.

As regards cake, there is a decidedly active nquiry for the very meager supply in sight. The fact that ocean freights are about 10s. higher might operate to check inquiry on a well-stocked market. As it is, the output is quickly taken at a net return of $21 per ton to crushers in this section.

FLAXSEED.

In my letter of last week I took occasion to refer to the putative influence upon the seed market of a fairly well defined short interest. Yesterday, of course, was the day for settling August contracts, and from the general course of the market and the character of the transactions reported one might draw the inference that the short interest in the market had been somewhat overestimated. Some arrangements may have been made on terms not disclosed, but the fact remains that my statement of last week was founded upon estimates more or less distorted.

This week's market has shown an appreciation in prices. Cash seed opened on Monday at $1 18 and closed to-day at $1 23½. September delivery has ranged between $1 17 and $1 18. As to the future, there is a wide divergence of views, originating, probably, in the visitation in the estimates of this year's crop As regards such estimates, they are as widely apart as Christianity and Judaism. At present, the outlook seems to indicate a large yield, but of inferior quality. The general course of the market is shown below.

The week opened with 46,122 bushels in store, as against 33,352 bushels a week ago and 145,040 on the corresponding date of 1887. A comparative view of receipts and shipments is given below:

| | Receipts. | | Shipments | |
|---|---|---|---|---|
| | 1888. | 1887. | 1888. | 1887. |
| Monday | 51,486 | 14,082 | 10,920 | 104,413 |
| Tuesday | 39,615 | 33,585 | 13,538 | 21,802 |
| Wednesday | 28,210 | 47,084 | 9,456 | 14,061 |
| Thursday | 31,288 | 81,350 | 7,429 | 14,655 |
| Friday | 15,718 | 28,937 | 28,235 | 31,200 |
| Saturday | 7,775 | 14,676 | 13,777 | 10,328 |
| Total | 174,092 | 171,724 | 83,355 | 196,549 |
| Last week | 106,638 | 171,853 | 58,796 | 200,182 |

The total receipts, as shown by the official statement of the inspector, have been 267 cars, of which 162 were ranked as No. 1, 36 as rejected, and 69 as no grade. Sales for the week, as reported on 'Change, have been as follows: Of cash seed, No. 1, 90; rejected, 25; no grade, 32.

The week closes with a decidedly strong feeling for both cash and futures. The true inwardness of the whole situation hinges upon the problematical question—what will receipts be and what is the probable crop? No one pretends to be in a position to solve either of these conundrums.

OILS.

The week's advance in lard has not been without its sympathetic influence upon lard oil, which is more firmly held, although the advance in the former has not been indicative of a corresponding appreciation in the latter. Stocks—both of lard oil and lard stearine—are abnormally light for the season, and nominal quotations for both lard oil and lard stearine are high. There seems to be an abiding faith in the future among pressers, and there can be no doubt that another week will show a tendency toward an accumulation of stocks which may or may not result in an advance in prices.

So far as the local market in oleo is concerned, the week has witnessed a decided improvement. At the same time, holders prefer exportation to local sales at ruling prices. To-day's exports have aggregated 3,440 tierces. Advices from Rotterdam indicate sales of 3,000 tierces.

While churners admit the fact that it is a questionable policy to buy American stocks the demand for foreign oleo is tolerably brisk, at least enough so to stimulate exportation from this point which seems to be going forward, with tolerable rapidity. Local manufacturers of butterine are confronted with prices for legitimate butter ruling at rather low figures; yet the artificial product is able to hold its own on its own merits and an improvement in inquiry among local buyers

would occasion no surprise. So far as the feeling in Holland is concerned cablegrams from the Dutch markets indicate a firm feeling among churners with a disposition to buy freely.

PAINTS.

The leading jobbing houses in the trade report abusiness in excess of the same period last year and a hopeful outlook for the coming fall trade. The agricultural implement houses are placing their contracts. Some of the largest concerns have already negotiated contracts. On the whole this year's prices have hardly exceeded the contract figures ruling twelve months ago. And yet, despite all recriminations of a year since, there seems to have been about equal competition. Outside of this rivalry the fall trade gives fair promise of improvement and dealers are generally hopeful as to the future.

The Executive Committe of the local Paint, Oil and Varnish Club held a meeting on Thursday. The Saratoga conference of paint manufacturers was considered ample reason for postponing the monthly meeting. The meeting has been postponed from September 13 to September 27. The local club will be represented by a full delegation, the parties chosen having been C. H. Cutler, of C. T. Raynolds & Co.; G. H. Vrooman, of Bradley & Vrooman; and G. B. Coffin, of Coffin, Devoe & Co. There is more or less speculation among the local paint trade as to the outcome of the Saratoga conference. The prevailing impression is to the effect that the conference will prove of great value to the trade throughout the country. At the same time, there is no hope that the national association, if formed, can do more than exercise an indirect influance upon the general course of the trade. A national association might be in a position to demand attention from both legislative assemblies and common carriers.

DRUGS.

The drug market for the last week has exhibited no changes worthy of note. Opium still remains the focus of interest. The published telegraphic advices from New York have not been without their influence upon local inquiry. While opium is being billed here at last week's prices, there is noticeable a disposition on the part of jobbers to buy more freely than a week ago. How far this disposition may be regarded as indicating an abiding faith in the future of this particular line remains to be seen. The demand is still of a consumptive character only. Quinine is at once firm and quiet. The inquiry and offerings appear to be about equal. Speaking of the trade in general, the volume of sales while exceeding by a considerable percentage that of the same month last year, can hardly be said to have appreciated to an extent altogether satisfactory to the local trade. CALUMET.

## MISCELLANEOUS.

### The Wholesale Druggists' Convention.

Secretary Fleming of the Trunk Line Association informs the REPORTER that delegates to the National Wholesale Druggists Association convention, starting from points in New York State do not need the railroad certificates, but merely certificates of identification signed by Mr. Merriam.

Although no attempt has been made to organize any party for the trip from New York to Saratoga, the morning and afternoon trains on both the Hudson River and West Shore roads on Monday next will take a good many delegates from this city and those from Southern and Western points who go via New York. The day boat to Albany on Monday and the Albany or Troy night boats will also take a number of druggists. The most attractive ride would probably be by the West shore train leaving at 11:15 A. M., which has a through drawing room car. The round trip rate by that road has been fixed at $6.

### An Addition to the Cotton Oil Industry.

The Cotton Oil Product Co., of New York, has been incorporated with offices at 80 Beaver street, for the sale of cottonseed products, including salad and lubricating oils, cottonseed lard, soaps, &c. The officers are, LeGrand L. Benedict of the Stock Exchange, president; W. Harris Roome, vice-president; Frederick H. Benedict, treasurer, and James W. Tappin, secretary and manager. Extensive works will be erected in this city and a sales department established up town, in addition to agencies in other cities and Europe.

### The National Paint and Oil Club.

The secretary of the New York Paint, Oil and Varnish Club informs us that he has received notice from the Pittsburg association that it will be represented at the Saratoga convention, Sept. 11-14, by the following named delegates: Messrs. M. B. Suydam, G. A. Kelly and Dr. L. H. Harris. The Baltimore trade, we are informed, will also be represented, the following named gentlemen having signified their intention of being present: Messrs. Hirshburg, W. B. Price and George Poplein. The delegates named by the Chicago club are Messrs. C. H. Cutter, G. H. Vrooman and G. B. Coffin.

The St. Louis club has not been heard from to date, but will in all probability appoint delegates to represent it at the Saratoga conference. It is hoped that other cities in which no organizations exist will follow the example of Baltimore.

### Cottonseed meal as a Cattle Food.

In a previous issue of the REPORTER was published a table giving the manurial value of cottonseed meal, and by request we give the following analyses relative to its value as a cattle food, which shows that cottonseed meal is prepared over all other feeding stuffs:

Table giving the water, ash, digestible nutrients, nutritive ratio, and money value per 100 lbs. of various American feeding stuffs taken from Prof. E. W. Stewart's very valuable book on "Feeding animals."

| Kind of feed. | Water. | Ash. | Digestible nutrients. Albuminoids. | Carbohydrates including fibre. | Fat. | Nutritive ratio. | Value per 100 lbs. |
|---|---|---|---|---|---|---|---|
| | % | % | % | % | % | as 1: | $ |
| Clover hay | 12.56 | 6.10 | 7.28 | 40.25 | 1.49 | 5.6 | 0.77 |
| Meadow hay | 10.50 | 5.80 | 4.38 | 44.55 | 1.06 | 10.7 | 0.62 |
| Timothy hay | 11.07 | 4.06 | 3.67 | 41.25 | 1.03 | 12.7 | 0.62 |
| Oat straw | 9.62 | 5.20 | 1.44 | 42.62 | 0.66 | 30.6 | 0.49 |
| Wheat straw | 6.50 | 6.96 | 0.85 | 37.70 | 0.54 | 45.8 | 0.39 |
| Rye straw | 11.11 | 1.84 | 0.95 | 37.55 | 0.54 | 41.0 | 0.40 |
| Corn stalks | 15.00 | 4.02 | 1.10 | 37.00 | 0.30 | 34.4 | 0.39 |
| Fodder beets | 88.00 | 0.80 | 1.10 | 10.00 | 0.10 | 9.3 | 0.14 |
| Potatoes | 75.00 | 0.90 | 2.10 | 21.80 | 0.20 | 10.6 | 0.29 |
| Turnips | 92.00 | 0.70 | 1.10 | 6.10 | 0.10 | 5.8 | 0.11 |
| Barley | 14.30 | 2.20 | 8.00 | 58.00 | 1.00 | 7.9 | 0.95 |
| Oats | 14.30 | 2.07 | 9.00 | 43.30 | 4.70 | 6.1 | 0.98 |
| Rye | 14.30 | 1.08 | 9.90 | 65.40 | 1.60 | 7.0 | 1.08 |
| Wheat | 14.40 | 1.07 | 11.70 | 64.30 | 1.20 | 5.8 | 1.14 |
| Sorghum seed | 12.52 | 1.80 | 6.84 | 53.06 | 2.99 | 8.5 | 0.90 |
| Brewers grains wet | 75.00 | 1.01 | 4.06 | 9.73 | 1.41 | 3.2 | 0.32 |
| Brewers grains dry | 8.19 | 3.58 | 14.52 | 37.41 | 4.77 | 3.3 | 1.20 |
| Malt sprouts | 10.28 | 5.67 | 18.82 | 52.95 | 0.88 | 2.3 | 1.33 |
| Buckwheat bran, | 14.00 | 3.40 | 13.50 | 44.00 | 3.90 | 4.1 | 1.15 |
| Corn bran | 12.00 | 2.30 | 6.02 | 55.00 | 3.60 | 10.3 | 0.92 |
| Rye bran | 11.48 | 3.68 | 12.00 | 48.98 | 1.43 | 4.4 | 0.89 |
| Wheat bran | 12.42 | 5.68 | 11.72 | 44.66 | 2.58 | 4.4 | 1.02 |
| Wheat middlings | 12.00 | 3.18 | 11.60 | 48.87 | 2.68 | 4.7 | 1.00 |
| Pea meal | 11.40 | 3.50 | 20.90 | 55.40 | 2.80 | 3.00 | 1.53 |
| Corn meal | 15.19 | 1.48 | 7.27 | 63.40 | 3.29 | 9.80 | 1.03 |
| Linseed oil meal old process | 9.20 | 5.87 | 25.85 | 26.52 | 7.08 | 1.60 | 1.66 |
| Do. new pro'ss | 10.75 | 5.57 | 28.25 | 27.95 | 2.80 | 1.30 | 1.54 |
| Cottonseed meal | 8.33 | 7.25 | 35.75 | 22.25 | 11.65 | 1.40 | 2.25 |

Col. F. D. Curtis of Kirby Homestead, Saratoga county, N. Y., the well known agricultural writer and a large and influential feeder, writes as follows from Charlton, Saratoga county, N. Y., August 7, 1888: "Our cows never did so well. They make, this dry weather, one pound and a half of butter daily. This is an average for the herd, including three heifers and one old cow. They get one quart of cottonseed meal and three quarts of wheat bran each, once a day. With this feed, and pasture much dried up, 16 59-100 lbs. milk made a pound of butter at the butter conference held here under the direction of the New York Dairymen's Association. I have no hesitation now, after a summer's test, to recommend cottonseed meal, not to exceed three poupds per day for a cow, as valuable; and in fact almost essential to get the full and profitable income a dairy should return. It is a food which keeps the cows from running down. The butter made is choice, firm and solid. I think the combination of bran and cottonseed meal just right. You are doing a good thing for dairymen in introducing cottonseed meal, and you are now at liberty to refer to me, if you wish, for all indorsements of its merits. My wife says: 'Our cows never did better, and this is the time of dog days.'"

### The Carload Lot Cases before the Inter-State Commerce Commission.

Following is the argument by the attorneys for the complainants and presents their side in a clear manner, containing about all that can be said on that side:

These cases, three in number, were brought (a) on behalf of a committee of the New York Board of Trade and Transportation, (b) by Thomas L. Greene as manager of the Merchants' Freight Bureau of New York, on behalf of some hundreds of merchants in the interior states and (c) by Francis H. Leggett & Co., of New York, against the trunk line railroads. They were tried before the Commission in January last after a mass of evidence had been taken at Mr. Fink's office in this city by depositions, and have just been submitted for decision. The printed testimony makes a ponderous volume of some five hundred pages and includes a large number of valuable statistical exhibits prepared at the office of Mr. Fink and altogether the cases seem to be the most formidable upon which the Inter-State Commerce Commission has yet been called upon to pass.

The matter complained of is the imposition of excessively high rates upon less than carload shipments from the East to the West on grocery staples and various other articles of household and common use, as compared with verp much lower rates for the car-load quantities on the same articles. These discriminations were put by the railroad people into their westbound tariffs since April 1st, 1887, so that whereas ten years ago the classification from the seaboard west-bound had only thirty articles which took a less rate in carloads than for small quantities, the number now having such differences for quantity exceed nine hundred articles.

To arrange for the new state of things which was necessitated by the passage of the Inter-State Commerce law, the railroads advanced the rates for small quantities of these staples on the first of April, 1887, to figures higher than for any time during the previous ten years, so that at the present time these rates for small quantities exceed the rate on the articles when in car-loads in some instances by more than 100 per cent., and this too without any change in the circumstances and conditions attending the transportation to warrant such increase. The testimony shows that these great differences between car-loads and less than car-loads were imposed by the railroads for two reasons; one was to give back to the local roads their old local rates. It is a well known fact that grocery staples were carried from station to station before the passage of the Inter-State Commerce act, by the railroads at rates which wdre grossly out of proportion to the charges made for the transportation of like articles between competitive points. This gross discrimination against the small towns and villages was one of the main reasons for the passage of the Inter-State Commerce act, and it is shown that the present classification and tariff was arranged in this manner to give back to tne local road in another form the same local rates which they had before the passage of the act and which the act forbids; another reason for those excessive rates on small shipments was to give back to large shippers such advantages as they had before the passage of the Interstate Commerce Act by reason of rebates, drawbacks and other well known devices, which discriminations for quantity carried by the railroads were sometimes so great as to drive the smaller shippers nearly out of business. It was proposed by the railroads to continue this great discrimination to the large shippers and in favor of large quaetities by the device of classification in the very teeth of the Interstate Commerce Act forbidding them.

It is also of interest in this connection to notice that before the 1st of April, 1887, twenty thousand pounds constituted the capacity of a car and was considered a car-load quantity, but since that time no shipment for less than twenty-four thousand pounds can, according to the rule imposed by the new tariffs: have the reduced rate, and as the car-load is an increasing quantity really meaning any specified tonnage upon which the railroads may wish to insist, and as the newer cars bave a capacity of forty, fifty and sometimes sixty thousand pounds, the tendency is to make the arbitrary limit of a car-load increasingly large so that next year it may be advanced by the railroads from twenty-four thousand pounds to twice that quantity, as it has just been advanced from twenty thousand to twenty-four thousand pounds, and may possibly be made ultimately as large as what constituted a train load in the early history of railroading.

The railroad piers and stations in New York and large cities receive large quantities of merchandise, which, individually, are less than twenty-four thousand pounds, but which bunched and loaded into cars to their full capacity make up full car-loads, so that without any additional expense the railroad people get from such cars so loaded to their full capacity on which the highest possible less than car-load rate is charged, three times the revenue which they receive from car-loads loaded with one kind of freight which go at car-load rates. This is a gross wrong to the small shippers whose freight is so bunched and loaded, and who is, therefore, equitably entitled to the benefit of any such economies in transportation.

The testimony of the witnesses for the railroads in these cases fails to justify these differences, the witnesses, moreover, disagreeing among themselves as to the reason of such differences. The theory of difference in the cost of service was one of the main reasons advanced by the witnesses for the railways in defence of the present rates, but it is shown that this cost bears no relation to the difference in rate, and indeed in this regard the whole tariff seemed to be arranged by "rule of thumb" no definiee principle being discovered.

Tariffs, as well as other things, often take the line of least resistence, and in the making of these tariffs, it is a fact that the small shipper is usually the forgotten man. It was shown in the testimony (p. 3 and 4) that the difference in rate of freight charges in the case of most of these articles equals or exceeds the jobber's net profit, so that such a freight rate practically forbids sales of these goods at the seaboard and shipments westbound in the smaller quantities.

The result of the present classification is, therefore, that the retail dealer throughout the country is restricted in his buying to his own home market; the lack of competition resulting therefrom increases the prices he has to pay and decreases the quality of his goods, so that the consumers who are the customers of the retail dealer, and the majority of whom are included in what is known as the laboring class must, if the present state of things becomes permanent, pay higher prices for poorer goods. Besides this, the absolute constitutional right of the retail grocer and Western farmer unrestricted by rates which discriminate against him for quantity to buy and sell in any market in the United States is infringed.

### The Opium Smugglers.

Erwin A. Gardiner, the opium smuggler, who was arrested in Chicago early in August, was before United States Commissioner Hayne last Wednesday morning on the charge of feloniously conspiring with John W. Stone, William J. Commisky and Nathaniel Lyttle, jr., to steal and carry away certain boxes of opium seized by the customs authorities and stored at Ogdensburgh, N. Y. It was shown that Gardiner caused to be made and sent to Ogdensburgh a number of cans containing blocks of wood which were intended to be substituted for the seized opium in furtherance of the scheme to steal the latter.

At the request of counsel a continuance of the examination for ten days was granted, the date of the hearing being set for September 6th. The impression has got abroad that Gardiner is either a detective in the employ of the Government or has determined to turn State's evidence against those associated with him in the alleged smuggling and conspiracy to steal the seized opium. Color is given to this view by the fact that the prisoner has had numerous interviews with the United States officers, and because of the excellent and even familiar and confidential terms on which he seems to be with them all.

### Lard in England.

REPORT OF U. S. CONSUL LATHROP.

It was a necessary consequence of the late proceedings in Congress and before the Committee on Agriculture with reference to the manufacture of lard and of "refined" lard that attention would be drawn in this country to the question, and it was in reasonable expectation that proceedings would be taken by the authorities under the "Food and Drug Act" against venders of the adulterated article, for thus is it plainly designated in England, and the euphonism "refined"—whose meaning is as well understood by the trade here as in the States—is not employed.

The Department is already, in all probability, informed of the action taken by the health committee of the Town Council of Liverpool on the 20th of June last when several wholesale importers of American lard were fined for selling "lard not of the nature, substance, and quality demanded by the purchaser." The prosecution was based upon an analysis of American lard made by the public analyst, who found therein cottonseed oil and stearine—either beef or mutton fat. The analyst was stated to have discovered, after eighteen months' investigation, a method of detecting these foreign matters in the lard. It is, however, reasonable to assume that he gathered from the evidence before the House Committee on Agriculture the knowledge that nitrate of silver unerringly indicated the presence of cottonseed oil. The accuracy of his analysis was questioned by no one of the defendants, one of whom asked and obtained leave to appeal. This appeal case has not yet, I believe, been heard.

It was almost certain that the action of the Liverpool authorities would be followed by suits and summonses in other places, and I have now to report that on the 24th of July eight retail dealers were summoned in Bristol for "selling a pound of something which was not the article demanded, namely, lard." The police proved the purchase of the lard at the respective stores of the eight defendants, and that they had in each case complied with the requirements of the act by informing the grocer of the object they had in view in purchasing, and by leaving with him a portion of the quantity bought. The public analyst testified to the presence in each sample analyzed of considerable quantities of cottonseed oil and foreign fat, one sample containing 50 per cent of the latter. Three American houses were involved. The magistrates in giving their decision said that it was the first time the matter had been brought before the court, and they thought the objects in view would be gained by the publicity given to the proceedings. Hence they would not convict, and would consent to the information being withdrawn on the defendants paying costs.

The facts in relation to these Liverpool and Bristol cases were widely disseminated by the press, and not a few solid editorials congratulated the people that at last the chemists of this country were able to "cope with the smartness or roguery of our American cousins." What the immediate effect upon the trade has been, it is too soon to say. The agents of the "refined" or compound lard wrote one customer (and the presumption is that all received similar communications) after the Liverpool trial offering an allowance upon unsold stocks, requesting him "to do the best he could with what remained in hand" and inclosing labels to be affixed, of which labels one is forwarded herewith:

THIS PRODUCT
REFINED LARD
IS A MIXTURE.

Whether the employment of the words "This product is a mixture" would constitute a good defense is, I believe, an open question

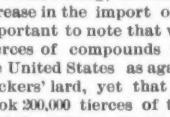
The ultimate effect of these trials and the publicity given their results upon our trade in this country in lard, I may with a certain amount of confidence predict, will be as follows:

The 50,000 or so tierces of "compound" lard annually imported into this country—England and Scotland—will cease to come here, and there will be a corresponding, or nearly a corresponding, increase in the import of natural lard. It is important to note that while last year 600,000 tierces of compounds were exported from the United States as against 400,000 tierces of packers' lard, yet that England and Scotland took 200,000 tierces of the latter and only 50,000 of the former. In other words, Great Britain takes 25 per cent of the lard export of the United States, but instead of three-fifths of the British import consisting of compound lard and two-fifths natural, only one fifth is compound, while the other four-fifths is pure. A controlling reason for this is to be found in the operation of the food and drugs act, which has discriminated and will discriminate between the pure and the adulterated, and which has not and will not condemn all American lard on account of its origin, but only such portion as it finds, upon investigation, to deserve condemnation. It is possible that there may, for a limited time, be a narrowed demand for American lard, but in the end our export of pure lard will be materially increased so far as Great Britain is concerned.—*Bristol, Aug.* 1, 1888.

### The Rise and Power of Caffeine.

We have now before us the first fruits of the recent successful application to Government for the right to use "denatured" tea, duty free, for manufacturing purposes, in the form of a very fine specimen of the alkaloid caffeine, prepared, from the material named, during the present month, under the new conditions, says the *British and Colonial Druggist*. The compound is superior in appearance to most of the imported brands, and is in the form of pure, white silky acicular crystals, resembling when in bulk, quinine, and possessing like that principle, though in a less degree, a bitter taste. As the subject of the preparation of caffeine in England from damaged tea, and the consequent probable impetus to the therapeutical use of the alkaloid, have attracted considerable attention recently, both in medical, pharmaceutical, and general circles, we propose to follow our sketch of the history of the agitation, with a summary of the present state of our knowledge as regards the chemistry and therapeutics of caffeine itself.

The alkaloid caffeine, which is idential, chemically and physiologically with theine and with guaranine, is remarkable in containing more nitrogen in its molecule than any other known alkaloid except theobromine, being represented empirically by the formula $C_8H_{10}N_4O_2$. Concerning its constitution—a factor of very considerable theoretical and some practical interest. in the case of all such bodies—two theories have been advanced; one by Medicus, in 1875, and the other by Emil Fischer, in 1882. That of the latter investigator accords best with the nature of the decomposition products of the principle, and is graphically exhibited as follows:



Caffeine may be prepared from tea by one of at least three processes, viz., (1) by exhausting with boiling water, removing tannin with lead subacetate, and excess of the latter with sulphuretted hydrogen evaporating and crystalizing; (2) by filtering an aqueous decoction, evaporating to a syrup, mixing with slacked lime, and extracting with chloroform; or (3) by evaporating the filtered decoction with oxide of lead, adding carbonate of potassium to the syrupy product, and extractiug with alcohol.

The pure alkaloid is only slightly soluble in water (1·35 bart in 100 at 60° F), less in alcohol, and still less in ether (0·044 parts in 100 at 60° F.). It is most soluble in chloroform, a hundred parts of which, at the normal temperature, take up 13 parts of caffeine.

With regard to its physiological properties, Dr. Julius Lehmann carried out a series of experiments and published the results in 1853. He chiefly directed his attention to the influence of the principle upon the functions of the kidneys, which his investigations showed were intensified in a marked degree by the administration of coffee or of caffeine. After a number of tabular statements of the effects of coffee drinking upon the quantity of the urine and the proportion of its constituents, he says:

The influence upon the organism of daily 4 grain doses of caffeine was, save an increased activity of the heart, not observable. Later, therefore, I gave G. M. (one of his provers) 8 grains daily, which induced a more frequent pulse, strong action of the heart, tremors and continual desire to urinate, though only small quantities of urine could be passed. At the same time the imagination was much excited, and subsequently confusion of thought, visions and especially a peculiar intoxication followed, succeeded by a profound sleep.

Lehmann also concluded that caffeine exerted a retarding influence upon tissue change. Gubler, Shapter, Leech and others also proved it to act promptly as a diuretic, simultaneously reducing the pulse rate. Its effects upon this organ are ascribed to a direct action upon the nervous system thereof. In its physiological influence, caffeine seems to resemble alcohol more than any drug, as it directly stimulates the whole nervous, muscular and vascular systems; yet it is a curious phenomenon that it prevents and moderates alcoholic intoxication, so that not only can more wine or spirits, etc., be imbibed, without symptons of poisoning, if coffee or any liquid containing caffeine be taken with them, but a strong dose of the same alkaloid will entirely avert or moderate an approaching condition of alcoholism.

These results are valuable and noteworthy in that they were obtained by observation of the influence of the principle upon perfectly healthy and robust organisms, and not upon those more or less abnormal from the touch of disease. But from the clinical investigations already made, though not in very great numbers, caffeine would seem destined to play an important part in the relief of suffering and in the saving of life. It has proved an efficient remedy in certain dropsical conditions associated with affections of the heart. Milliken, Brakenridge, Huchard and others relate instances in which it has rescued patients from the jaws of a threatening and imminent death by its direct stimulant effect upon those wonderful ganglia which act as generating cells of nerve force for the supply of motive power to the heart. In atonic dyspepsia, in melancholia, and in other nervous affections associated with the conditions of our much belauded nineteenth century civilization, caffeine has proved a useful remedy, and in it the vast increasing army of those who "coin their brains into gold," often at a rate which the recuperative power of nature vainly strives to compensate, will find a source of that mental exaltation and intellectual stimulus which are so often required most, when the overstrained faculties are beginning to revenge themselves for long years of unrelaxing tension and of inflexible abuse.

### Transfers of Valuable Oil Property.

A correspondent of the *Derrick* writing from Warren, Pa., says:

While the oil market hovereth around the 90 cent mark a healthy feeling prevails in oleaginous circles, and considerable activity is noticeable in the middle field. I do not speak now of drilling operations, for Warren operators are almost a unit in their loyalty to the terms of the shut down agreement. But several important transfers of oil property have been made of late, the most recent being the sale of the old Emerson property, on the Tiona flats, by Moore & Langworthy, of this place. The purchasers are Messrs. L. G. Noyes and John McWilliams, also of Warren, and the transfer was effected through the machinations of Mr. Willis Law, the urbane contractor, who is occupying his mind with deals of this kind, pending the termination of the shutdown. This property includes 31 wells and 10 locations, the former producing about 40 bbls. daily. The consideration received by Messrs. Moore & Langworthy was $32,500, and the purchasers are well satisfied with their bargain.

Several other transfers of oil property are "hatching" and expected to close within a day or two.

### The Bakerstown Oil Situation.

According to a *Dervick* telegram from Butler, the situation at Bakerstown is what might be termed critical. The Haymarket well on the Postoffice lot, is through the Butchers' sand and dry. The Calhoun well on the Gibson farm, 3½ miles southeast of the Butchers' well, is dry. The Cosgrove and Young well on the Harrison farm, is in the sand but not far enough to determine its completion. The Bradley well on the Sam Allison farm tapped the sand to-night and a good run to-morrow will settle the case for or against the well. The Wilson Oil Co.'s well, otherwise known as the Fischer well on the Sterling farm, near the Montgomery, is shut down on top of the sand to shut off a leak in the casing. It will not be drilled in much if any before the end of the week. All the wells named occupy important positions and the success or failure of any will exert an influence for good or evil in its neighborhood. The Wilson Oil Co.'s well is about 800 feet west of the Montgomery well. The Cosgrove well is about midway between the Butchers well and the producers on the Gold farm. As belt lines go, it is exceedingly westward. The Bradley well is a mile south and 100 rods west of the original Butchers' and about a mile northwest from the Millison gasser, the latter, by the way, is a gasser from Gastown. Gas sharps like Gibson and Giles, and L. E. Hampshire, of the Bradford Gas Light Company, who have seen the well, say it is the equal of anything anywhere. Mr. Millison says it is producing from the third sand.

This week will make or break Butlerstown's reputation as an oil center, with all the probabilities largely in favor of the latter. The Gold well, shot last week, is holding up at 100 bbls. a day.

At Reibold, Guckert 6 tapped the sand today, and made one little spurt just in the way of asserting itself, when they shut down to move the boiler.

Mr. Phillips' well, on the Blakely farm, finished last Saturday, is making 10 barrels an hour.

The old Schlegel well has produced more than 80,000 barrels. The farmer's portion thereof amounts to 10,000 barrels.

### Lard Measures in Congress.

The lard bill reported by Mr. Conger from the Committee on Agriculture, of the House of Representatives, as a substitute for H. R. Bill 6138, provides that the word "lard" shall apply to the food product usually known as lard, made exclusively from the fresh fat of slaughtered swine, and that any article offered as a substitute for lard, made of any ingredient or ingredients other than lard, or of any other ingredient or ingredients in combination with lard, shall be known as "compound lard."

Before compound lard can be lawfully made in the United States, the manufacturing concern must apply to the Commissioner of Innal Revenue for a license, the application to specify the names of all the ingredients of which the compound is to be composed, and if none of the ingredients are deleterious to health, the Commissioner may issue a license fer one year, for one hundred dollars, subject to such regulations as may be prescribed, the ingredients in the compound to be specified in the license.

Every person who sells or offers for sale compound lard in original packages is classed a wholesale dealer, and shall pay a special tax of twenty-five dollars a year. Every person who sells in less quantities than fifty pounds at a time shall be regarded as a retail dealer, and pay a special tax of five dollars a year.

Compound lard shall be packed by the manufacturer in tierces, barrels, half barrels, firkins, tubs or tin pails, not before used for the purpose, each containing not less than three pounds; wooden packages shall have the words "compound lard" branded thereon by burning in the letters, and tin packages by stamping in the metal, in letters not less than three-fourths of an inch in length, together with the name of the manufacturer, and the name of each ingredient used in such compound, which shall correspond with the specification in the license. All sales by manufacturers and wholesale dealers shall be in original stamped packages, and retail dealers must sell only from original stamped packages, in quantities not exceeding fifty pounds, packed in suitable wooden, tin or paper packages, which shall be marked and branded as may be prescribed.

Manufacturers, in addition to branding as specified, shall attach a label to each package, with the factory designation, notice of compliance to law, etc.

Upon compound lard which shall be manufactured and sold, or removed for consumption, there shall be assessed and collected a tax of two mills per pound, to be paid by the manufacturer.

Upon compound lard imported from foreign countries, in addition to any import duty imposed on the same, there shall be assessed and collected an internal revenue tax of two cents per pound.

Provision is made for the services of an analytical chemist and microscopist, who may be employed to determine as to the deleterious nature of ingredients mentioned in applications for license. All compound lard intended for human consumption which contains ingredients adjudged to be deleterious to public health shall be forfeited to the United States.

The bill provides for penalties, including fine and imprisonment, for violation of the law relating to manufacture and sale of compound lard. Also, that the law shall go into effect ninety days after passage of the act.

These are the features of the report of the majority of the committee. It is said that the minority report will be presented by Mr. Laird, of which the following mention is made by press telegram:

The report recommends an investigation of the lard question, and summarizes the evidence taken before the committee. It then goes on to show the importance of general rather than special legislation, and says of the hog product: If it is found necessary to protect lard, which comprises 14 per cent. of the hog, how much more important is it to protect the other 86 per cent. also. It cites the general adulteration of food products, shows the importance not only to the honest manufacturer, dealer and the farmer to prevent the practice of adulteration all over the country, but it says it is imperatively necessary to preserve the foreign trade, which has fallen off about $200,000,000 under the rapid increase of adulteration and misbranding in this country, which caused prohibitive laws to be enacted by foreign countries because of our lack of inspection and adulteration laws. The bill recommended for adoption prevents the transportation of articles of food and drugs not labeled as prescribed by rules. It provides inspection for slaughter houses, etc., where goods are for export, or to be transported from one State into another. It places the onus upon the manufacturer of misbranded or adulterated foods and drugs and upon the slaughterer of diseased animals. It imposes fines and penalties for violation of the law, and creates a division in the agricultural department to carry out its provisions. The bill, it is thought, will stand the test of the courts, and is based on the regulation of commerce and general welfare clauses of the Constitution. There are few, however, who think such a bill can be passed.

What the country needs, says the Cincinnati *Price Current*, is a measure, framed by intelligent men without bias as to special interests, which will give just and full protection to the consumer, so regulating the manufacture and sale of food products that wholesome and desirable compounds may be offered without undue restrictions, but which shall provide for such punishment for deception in branding and all other frauds, either in manufacture or sale, as shall be calculated to be preventive of such evil practices.

### How Oil Rockets are Made.

The use of oil to calm troubled waters is well known, and the latest invention, that of scattering it abroad through the medium of rockets, seems very likely to prove invaluable. Lieut. Cottman, of the Hydrographic Office, thus explains how the rockets are made:

"Above the rocket composition the shell is prolonged an inch and a half to receive the oil cylinder, which contains within it an exploding chamber filled with powder. Some loose powder is poured on top of the fuse composition, and the cylinder then slipped on the rocket. The stick is weighted with lead to balance exactly, so as to prevent trembling. All being ready the rocket is set off from a tube, and follows the direction given it. The burning composition finally reaches the loose powder and the flame is communicated through a small hole in the bottom of the cylinder to the bursting charge of powder within the exploding chamber, the cylinder is thrown forward and exploded, and the oil spread upon the surface of the water."

The rockets have been tested and found to be successful in their work.

### The St. Marys Oil Field.

At present the interest of the oil men centers around St. Marys. For the past month lease hunters have been busy hustling for territory, believing that a second Cygnet field was about to be opened. The Ohio Oil Company following the L. E. & W. road in their experimental drilling struck a gusher on the Ferguson farm about two months ago. This well is located about three miles northwest of St. Marys. As the well was not allowed to flow for any length of time, for want of tankage, no proper guage of it could be taken, although it has been estimated at 200, to 300 barrels and even higher. On the strength of this report everyone concluded it would be a good thing to have territory in that prolific field, and straightway the farmers in that vicinity found themselves the most popular men in Auglaize county and were sought after on every corner by parties who desired to form their acquaintance.

The Ohio Company had the inside track and even a great strip of country under lease before the Ferguson well was drilled and the terms of these leases depended on the result of this well. The lease stated that if the Ferguson well flowed 100 barrels a day for 30 days the Ohio company would pay the farmers a bonus of so much per acre. But as the well has not been given a chance to show itself the Ohio Oil Company are not as yet bound to pay this bonus. This has enraged the farmers. They believe they are being robbed and that oil men in general are a set of cut throats. J. D. Neily and Tim Spellacy who got in their work on these leases find life a burden in that vicinity. It keeps them busy dodging the wrathy farmers who vow vengance and cry aloud for their bonus.

After the Ferguson well was drilled the Trenton Rock Company started the drill about two miles west and south of there. This they completed last week and it showed up for about 50 barrels, not very profitable at 15c. The Ohio also moved two miles and drilled in a well last Friday. It was not very greasy, scarcely enough grease to lubricate a gimlet, and a lull has fallen over the field, still such men as Roberts & Herold, Major Woodcock, Conley & Bowen, the Ohio and Trenton Rock Oil Companies are after land and consider it worth possession.

Another thing that keeps the lease hunter moving is the laying of a pipe line by the Buckeye. Nothing but experimental wells could be drilled as long as there was no market for the production, but the action of the Buckeye is calculated to encourage the producer. A 2-inch pipe is being laid into St. Marys from the Fergusson wells. Here large wooden oil tanks have been erected and the oil will be loaded into tank cars for shipment.—Lima *Gazette*.

### The Petroleum Situation.

Capt. J. J. Vandergrift, President of the United Oil and Gas Trust, in an interview with a Pittsburg *Commercial Gazette* reporter furnished some highly interesting information about the condition of the oil trade in Western Pennsylvania and also the future of the Ohio petroleum trade. He claims that by next year there will not be enough oil produced in this State or left in stock to supply the demand of consumers, and for that reason the world will have to go elsewhere to get its full supply. The Captain also positively asserts that the Standard Company is not operating its refinery at Lima, and that the oil found in Ohio cannot be refined so as to compare with the Pennsylvania product.

The Captain's statement is as follows: "The stocks and production have been and will be so greatly reduced in this State that by next year we will not have enough to meet the demand made on us. I do not know what will be done to meet the emergency. It may be that a new field will be struck, but it will have to be an extra fine one to supply the deficiency.

BRADFORD WELLS FAILING.

"The Bradford wells are gradually running down and that field was the one we looked to for our greatest supply. The immense stocks which were above ground when the shut down movement commenced were all the products of the Bradford wells. The other territory, such as Cherry Grove, Pine Run, Washington county, produced only one-sixth of the daily consumption. The deficiency and over supply were furnished by Bradford. The average daily production of the latter has been reduced to about 15,000 barrels. That is remarkably low for that field, and indicates the general condition of the producing wells.

"The total quantity of available oil above ground at present is about 21,000,000 barrels; 16,000,000 barrels of this amount is certificate oil. The remaining 5,000,000 are credit balances, or what is used to fill the pipe lines. The producers hold about 6,000,000 barrels of the certificate product, scattered, no man knows where. There are then about 10,000,000 barrels of available oil in the tanks. Now the world demands from Pennsylvania about 76,000 barrels per day. The daily production amounts to about 47,000 barrels, consequently the stocks are being reduced about 38,000 barrels a day. That is at the present time, when little oil is being exported. The export trade will commence in earnest next month, and increase wonderfully each month until next February. I am positive that the stocks will be reduced in that time at least 6,000,000 barrels. That will leave but 4,000,000 barrels on hand and that quantity will soon disappear when it is reduced at the rate of 50,000 barrels daily. The shipments alone will amount to 6,000,000 barrels, then home consumption will have also to be considered in the general summing up.

THE PRODUCERS' FIX.

"When the producers who belong to the shut-down movement come to size up the situation they will find that not one of them can produce more than the quantity of oil alloted him. The Forest Oil Company, of which I am a stockholder, went into the movement and agreed to shut off half the production. This company has 513 wells, which were producing 2,000 barrels daily. The agreement was that only 1,015 be produced, That was last fall. This company has its pumps going full force at present, and cannot reach the daily production alloted it. This is because there has been no new wells drilled and the old ones have given out. Every company in the shut-down movement is in the same box, None of the territory is producing anything like what it did a year ago.

"The Ninevah well has turned out pretty well, but the owners had to sink three wells and spend a large sum of money before they struck oil. Now if this well does not turn out better producers will be deterred from entering that field. It costs too much to make a paying strike there.

"This condition of affairs will bring about a gradual advancement in the price of the Pennsylvania fluid. Oil will be $3 per barrel by the first of the year, and, as a consequence, the owners of small producing territory will begin operations. When producers know that they can get $3 or $4 per barrel for their product they will drill these three or four barrel-a-day wells. There is any amount of that territory about and it will be worked and no mistake. We have leased large tracts of land in Allegheny county, so have others. This territory is located almost at the city line. It is all good for a five or six barrel production. This will all be operated and it will pay."

OIL WELLS WORKED OVER.

"Then in the Bradford regions there are any number of oil wells which will be worked over again. This locality will resemble the upper oil country in its palmiest days. There will be small wells on every farm and every one I believe will be a producer in a small way and the owners will get a good price for the fluid. All these holes combined will help make good the deficit, but still the daily demand is so enormous that there will still be a large shortage.

"Then I suppose Lima oil will be refined and sold for what it is worth. It will answer for some purposes, but as a competitor of Pennsylvania fluid for illuminating purposes it is away behind the age. There is this much about Lima oil. It can be refined and deodorized and made to look, and have as agreeable an odor as the oil in this State, but when that is said, all's said. The moment it is put in a lamp and an attempt made to burn it, then the secret's out. Lima smokes the chimney, fills the room with an almost unbearable odor. It does well enough if burned in a torch in the open air, but as an inside-doors illuminant it is not a success.

"The Standard erected a refinery at Lima and ran it for awhile. Benzine was the product of this refinery, and not illuminating oil. The distillate was sold for fuel in the West. The benzine was shipped East, and really pays better than refined oil. The Standard has operated the refinery in that way at different times, but refined oil has not been made there. I do not say that the company will not attempt to make an illuminant of a certain kind of the Ohio product. It is likely such will be done, but the stuff will be sold as Lima refined oil on its merits as an inferior quality of illuminating fluid, and not as a competitor of the illuminants made from the crude oil of this State. The high price of our own fluid will make a market for the Ohio product, as many poor people will burn it for economy sake. When that time comes the Standard will operate the refinery at Lima.

THE OHIO OIL.

"I take the exception to Mr. Reighard's statements. If the Ohio oil can be refined why does he pay $1 15 per barrel for Washington county oil when he can have the Lima fluid delivered at his refinery at 50 cents. He does not do so, and that is very conclusive that he knows what he says is untrue. Those fellows accuse me of being a bull, and that I hold a million or two barrels of Pennsylvania oil which I want to boom. That is not true, and they know they lie.

"I have interests in a number of producing companies which nets me about 500 barrels per day. Before the shut-down movement took place I was getting about 50 cents per barrel for that product. Now I am receiving over $1. In other words, I am receiving about $15,000 per month for what realized only $7,500 per month. That is why I am interested in an advance in oil. Not because I have any interest in the fluid sold on the Exchange floor.

"Tell these gentlemen that we producers have been kept poor long enough and that we are all going to become rich. The boom is sure to come, and the $3 oil period is close at hand. It will be hard to get enough of it at that price."

## Oil For Coal in Russia.

A part of Bakoo is called the "black town," because of the smoke which formerly arose from the great kerosene manufactories herein situated. Twenty millions of puds of clarified distilled burning oil are now sent each year up the Volga to be distributed throughout the north, and 10,000,000 over the railroad to the Black Sea. These figures are, I think, correct. We met or passed great trains with from twenty to thirty huge cistern cars, such as are used in America, only larger, at a dozen or more stations. Five hundred ships ply in and out of the harbor distributing this oil. It now burns on the headlights of locomotives on daily trains running a thousand miles beyond the Caspian into Central Asia. Who knows? Perhaps this is the light from the west which is to illuminate the heart of that great continent—material light, to bring in its wake a purer spiritual light! The oil in these regions is not so strong as that of Pennsylvania, and does not emit the same strong odor. While at Balakhna we walked upon a soil sodden with oil, we skirted little lakes of ril, we crossed on little bridges over flowing streams of oil—streams large enough to turn good-sized mill wheels. There was a greasy smell about it, but now as much of what we at home call petroleum smell as one catches from a half dozen of our oil cans.

While far less burning fluid comes from a ton of this naphtha than from the same amount of American oil, yet it is claimed here that the larger refuse is much more valuable—more valuable for lubricating and for heating purposes. It is used for heating in every way. Food is cooked with it, stoves in the houses have pipes over the grates with the faucet. A man lights a fire, and turns a faucet and keeps his room warm. Manufactories use no other fuel except to light up with it, for it does not ignite except over high heat. Locomotives burn it, and ships and steamboats have dispensed with coal and use only a few cords of wood to start up with. The engineer of a locomotive steps from his engine with a white shirt front, cleaner far than that of the first-class passenge, who, being behind, catches more or less dust. The fireman's clothes are greasy from the oil he uses on the machine, but his face needs no washing when he goes to his dinner. The fire roars in the fire box and the steam screams when the throttle is turned and the train rushes at the rate of thirty miles an hour, but the plates in front of the fire box are as clean as my lady's tiled hearth in the parlor. We rushed up from the sea to Astrakhan at the rate of sixteen miles an hour on a steamer. I went down into a boiler room and all was as clean as a first-class kitchen, and under each boiler there was less than a capful of ashes, made early in the day when a few sticks of wood were burned to start the flame. The agent told me that one pound of this fuel had as much evaporating power as a pound and a half of the best coal. At Baku this fuel costs 1½ kopecks a pud, at Astrakhan about 7, and the average price thence up to Nijni, 1,530 miles, is about 14 kopecks, the price increasing as the distance increases from the supply. Assume 60 puds to the ton and 100 kopecks to be worth 44 cents, and make your calculation as to the comparative cost of oil refuse and coal.

But the cost is far from being the only gauge of the superiority of this fuel. There is no smoke from the smoke pipes and no cinders to fill cars and passengers' eyes. Fuel is run into the fuel tank in the locomotive tender as easily as water is, and the stoker keeps up his fire by now and then turning a faucet. The steam can be gotten up before a fire can be got to burn with coal, stoker labor is saved for feeding the grates, and entirely saved from the labor of changing the ash boxes. I have not yet been enabled to find how far north this fuel is used on railroads, but in all regions contiguous to the Volga none other is employed, and among the vast number of steamers for passengers and towing on this great river, no other fuel is consumed. I am informed that already a decided improvement is visible in the salvage of forests and probably an increase in the rainfall. The commerce on the Volga is so vast, and on the railroads leading to it, and the consequent destrution of forest was so great that the stream was certainly losing its depth, owing to lessened rains. Forests are being saved, and the Volga is deeper. This information from the agent and one of the directors of the great Caucasus Mercury Steamboat Company, a man of very decided intelligence, ought to have weight. He said to me when discussing the matter, if there was no other benefit from naphtha fuel this alone would make it a national blessing.—Carter H. Harrison in letter to *Chicago Mail*.

## Oil-Carrying Steamers.

The time is not far distant when the entire foreign petroleum trade will no longer demand the services of wooden vessels. With the rapid stride in producing labor-saving machines have come the oil tank steamers. They are the new ocean express trains, prescribed by advanced ideas to carry in bulk the oil production of an ever-yielding country to the extensive marts of an ever-consuming continent. Even now, in the youthful days of the innovation, fully 20 per cent. of the Yankee export trade in refined petroleum is shipped in the iron hulks of these tank steamers. Four years ago the tank steamer was a mere venture, an experiment that hundreds of long-sighted merchants said would be a failure. There were then in use and trading between Philadelphia and direct ports in France a small fleet of large sailing vessels which, on account of their large wooden knees, laid between decks, and other obstructions to good stowage, had been altered and converted into tank vessels. Everybody who watched the movement of these square-riggers agreed that the plan was practicable in a vessel propelled solely by wind, but all shook their heads in derision when it was suggested that the oil could be safely carried in the hold of a craft driven by steam. The experiment had been tried years before, they said, and a great sacrifice of life was the result.

The majority of these sailing ships had seventy-two tanks, arranged in six series of twelve each. Each series had one overflow tank. The storage tanks were filled flush with the top. Any pressure on the tanks caused by expansion of the oil through a rise in the temperature opened a check-valve in the pipe leading to the overflow tank and permitting a sufficient volume of the oil to escape. Then in turn, if the storage tank lost any oil through evaporation or leakage or contraction from cold, the pressure from the expansion tank caused a second check-valve to open and the main tank was again filled.

The first tank steamer built for the trade was loaded here in 1885. This vessel had a capacity of 14,000 barrels. The "skin" of the steamer served as the sides of the tank. The vessel was peculiarly constructed, the between decks forming the top of the lower hold tanks. The top was so built as to present a convex surface to the oil below it. Above the lower hold were erected other tanks of sufficient capacity to adjust the center of gravity of the cargo to its proper position. The inside of all the tanks was covered with a patent enamel to prevent discoloration of the oil by contact with the iron. The engines were placed far aft and the engine-room was separated from the tanks by a double bulkhead, the space between being filled with pure water. This made communication between the furnaces and cargo impossible. The vessel was lighted throughout by electricity, and the gallery or cooking quarters heated by steam. Electric hand lamps were used, so that the danger from accident by the contact of gas arising from the oil with a naked light was avoided. The tanks which were most likely to be affected in case of collision at sea were all arranged below the load-water line. The consequence of such an accident would be that the oil would be replaced by water and the stability of the steamer would be in no way affected. The vessel was supplied with two 18-inch pumps, which were capable of discharging the cargo in twelve hours.

The description of the first bulk steamer serves as a description of the entire fleet now engaged in the trade, with the exception that the later ones have improved appliances to provide against the expansion and contraction of the cargo. There are now twenty-odd vessels engaged in the trade, all sailing under the German, Norwegian, French and English colors. Half a dozen of the German steamers run regularly between Philadelphia and Hamburg and Bremen. The British steamer Chester, constructed this year, makes regular trips between Philadelphia and Rotterdam. The French steamer Ville de Calais has opened up a steady route between Philadelphia and Calais. The success of the enterprise is the deathknell of the wooden sailing vessel. The saving in time, in loading and discharging, the economy of maintenance, the quick dispatch in forwarding and delivering, the absence of water ballast, stevedores and inspectors, are the advantages of the new system. About three days are required to prepare one of the steamers for sea, while frequently the same cargo would mean a fortnight or three weeks' delay to a sailing vessel.—*Ex.*

## Progress in the use of Petroleum.

The following paragraph appears in the London *Globe* of May 4th:

"Petroleum as a Substitute for Coal.—The sittings of the ordinary general meeting of the Institution of Mechanical Engineers were resumed this afternoon at the Institute of Civil Engineers, 25 Great George street, Westminster, Mr. Edward H. Carbut, president, occupying the chair. A paper was read by Mr. Thomas Urquhart, locomotive superintendent of the Grazi and Tsaritsn Railway, Southeastern Russia, on 'The Use of Petroleum Refuse as a Fuel in Locomotive Engines.' He stated that since November, 1884, the 143 locomotives under his superintendence had been fired with petroleum refuse, besides 50 stationary boilers, two brass melting and other furnaces. Petroleum was, in fact, the fuel used for all steam generating purposes to the complete exclusion of solid fuel except a very small quantity of wood for starting the fires in horizontal boilers of pumping engines. For all metallurgical operations also at the central works petroleum was used as fuel except for the smiths' fires and the foundry cupolas and it was thought that the present difficulties in its application to these two remaining exceptions would be overcome. With a locomotive in first-class order and in the hands of a skilful driver 50 tons of petroleum refuse were equal to 100 tons of first-class coal, while in special trains this ratio had even been exceeded. Now that petroleum seemed destined to occupy a prominent place in India, as well as in many other parts of the world, its value as a lubricant, as well as its use as fuel, was of especial interest to engineers.—A discussion followed."

The information thus conveyed is interesting to us, because while it is not very likely that petroleum fuel could ever be prepared so as to render it suitable for use in tea factories, yet if it comes to be employed on our railways, in the brewery and in the projected cotton factory, that would help tea planters greatly by lessening the pressure on the limited available supply of wood fuel. The cost of bringing petroleum fuel to Colombo might seem a strong objection, but from the fact stated by Mr. Urquhart that the refuse from the Baku wells yields double the force derived from coal, and, therefore, probably twice that given by wood fuel. On our railways, therefore, an experiment ought at once to be instituted. We shall be anxious to see the paper in detail, and meanwhile we may glance at a few points in a paper read and discussed at a previous meeting of the Society of Engineers. It was prepared by Mr. Percy F. Tarbutt, who had in the estimation of the President, Mr. Perry F. Nursey, been largely sucessful in adapting marine steam engines and furnaces for the use of liquid fuel. That is scarcely the term to employ, however, for our readers will be interested to learn that the Russian petroleum wells, which are now supplying Colombo so largely with oil for lighting purposes, differ essentially from those in America, by yielding 75 per cent. of thick residual stuff suitable for fuel against 25 per cent. in the case of the North American borings. Mr. Tarbutt, in the course of his paper said:—

"The quality of the crude oil in different localities varies greatly; the Pennsylvania petroleum yields about 75 per cent. of lamp oil and 25 per cent. of heavy oil suitable for fuel, whilst at Baku, on the Caspian, the proportions are reversed, only 25 per cent. being obtainable as lamp oil, and 75 per cent. as residue. The petroleum now being worked at Sibi in Beloochistan, contains scarcely any lamp oil, and is suitable only for fuel. The second source of liquid fuel is derived from the distillation of coal. From the gas works of the United Kingdom alone there is now an annual production of tar amounting to about 115,000,000 gallons and this is increasing at the rate of from 5 to 7 per cent per annum. The employment of tar and its products in the arts has been decreasing for some years, and unless some new commercial products in it, or applications of it, are discovered, there seems every prospect of its continuing to decrease. Tar and the green oils and creosotes obtained from the refineries are not substances which can be stored with ease or without expense, and consequently any profitable method of utilizing the surplus production is of importance, even in countries where coal is cheap and plentiful, as is the case in England. Other sources of present supply of liquid fuel are coke ovens, shale oil works and blast furnaces in which the adoption of systems for obtaining the by-products (including creosote oil) is increasing. The author has not yet had any opportunity of studying the question of the supply which will be obtainable from the immense shale deposits of the south of England, but according to Admiral Selwyn, who has given many years' attention to this subject, a practically inexhaustible supply of cheap oil may be obtained from this source when it is needed."

Admiral Selwyn, above referred to, took an active part in the discussion which followed the reading of Mr. Tarbutt's paper, and ind

cated his belief in the use of oil fuel even in war ships, but he naturally objected to the British navy being dependent on foreign nations for a supply of such fuel, and advocated the use instead of the products of the shales which are so plentiful in many parts of Britain. Whether it be natural oils from wells bored in the earth, or oils distilled from shales which is used, anything which will lessen the run on coal and wood fuel will be in favor of the tea planters of Ceylon. Here in Ceylon we are not so favored as some of our brethren and competitors in India and China are. In both countries constant discoveries are being made of coal, a mineral which, it is about as certain as anything can be does not exist in Ceylon. It seems from the paper read by Mr. Tarbutt that over and over again machinery for consuming oil fuel, tar and other residual matter was invented and employed, but laid aside with much loss to its projectors, in consequence of an immediate and large increase in the price of the oils, tar, &c., the moment a demand sets in. But apart from tar and the product of shales, the discoveries of natural oil of various qualities in America. Batoum, Burma, India, and many other places have been so numerous and the supplies on so large a scale, that we are not surprised to hear of great progress made in the use of petroleum oil or its residuum for furnace on shore and afloat, in lieu of coal. This wonderful mineral has merits of its own which will secure its being largely used, but what we desire to see is, so large a use of substitutes as will prevent a rise in the price of coal and not merely avert increased cost in the case of wood fuel but the danger of the exhaustion of supplies within easy reach of our tea factories. While on this subject we may ask if anthracite coal would not be a good fuel for tea factories if it could be laid down cheaply enough? It is largely a natural coke. At the opposite extreme is the lignite we recently mentioned as likely to reach us from Siam and about which we hope soon to hear further. The cost of transport to any great distance is the great difficulty, and if, as we were told, it may be possible to lay down from Siam at Colombo good quality lignite, fit for use in tea factories at R5 per ton, our fuel difficulties will very larely disappear. Meantime we cannot but watch with interest the enormous stores of liquid fuel, ready as distilled by natural action, which this old globe of ours is constantly revealing for the supply of light and warmth and force, as well as the progress of inventions whereby liquid fuel is used instead of solid blocks of coal or pieces of wood. In the United States there are already 9,000 miles of "oleoducts" (pipes for conveying petroleum), and a pipe is to be laid down between the oil wells on the Caspian and the Black sea, which is to be 600 miles long—from Baku to Poti or Batoum—the estimated cost being two millions sterling. Our readers may be surprised to hear how much of the effect of coal is lost each time a furnace is charged with cold material, and how great the superiority of petroleum oil is in this respect and others of importance. The case was thus stated in Mr. Tarbutt's paper:

"Turning from the sources of supply to the relative values of liquid fuel as compared with coal, we find in studying their theoretical evaporative values that the heat producing constituents of different oils varv almost as much as those of different descriptions of coals, and it is therefore only possible, without going into a labyrinth of figures, to take a standard in either case which shall approximate as nearly as possible to the average composition of the two fuels. The average composition of English, Welsh and Scotch coal is then about 80 per cent carbon, 5 per cent hydrogen, 8 per cent oxygen, the remaining 7 per cent being nitrogen, sulphur and ash, which for the purposes of this comparison may be disregarded. The average of the liquid hydrocarbons available as fuel may be taken at 87 per cent carbon, 12 per cent. hydrogen, and 1 per cent. oxygen. The total quantity of heat evolved by the combustion of fuel is of course equal to the sum of the heating powers of its elements, except that when oxygen is present a deduction must be made for the equivalent constituent of hydrogen neutralized by it. The heat evolved by the combustion of one pound of carbon is 14,500 English units, and by one pound of hydrogen 62,000 English units, or about four and one-third times as much.

"Now in the case of the coal a great part of the hydrogen is neutralized by the oxygen, being in fact present in the fuel in the form of water, whereas in liquid fuel nearly the whole of the hydrogen is uncombined with oxygen, and is therefore available for combustion; and it is to this fact that its higher theoretical evaporative value is mainly due. The value of the two fuels is then as follows:

| | English units. | Lb. of water evaporated per lb. of fuel at and 212° Fah. |
|---|---|---|
| Average coal..... | 14,000 | 14·48 |
| Average liquid fuel. | 20,000 | 20·7 |

In practice, however, other circumstances in connection with the methods of combustion of the two fuels considerably increase the theoretical difference between them. The hydrocarbons in coal, being in the solid state, absorb a considerable amount of heat in volatilizing, and, in the ordinary method of hand stoking, each time fresh coal is required a large excess of air must necessarily be admitted to the furnace, which has the effect of cooling it down at the very moment when the greatest heat is required. Mr. D. K. Clark gives the following description of what occurs in the furnace when freshly stoked: "A charge of fresh coal thrown on the furnace in an active state, so far from augmenting the general temperature, becomes at once an absorbent of it, and the source of the volatilization of the bituminous portion of the coal in a word, of the generation of the gas. Now, volitilization is the most cooling process of nature, by reason of the quantity of heat which is directly converted from the sensible to the latent state. So long as any of the bituminous constituents remain to be evolved from any atom or division of the coal, its solid or carbonaceous part remains black at a comparatively low temperature, and utterly inoperative as a heating body. In other words, the carbonaceous part has to wait its turn for that heat which is essential to its own combustion, and in its own particular way. If its bituminous part be not consumed aad turned to account it would have been better had it not existed in the coal, as such heat would in that case have been saved and become available for the business of furnace. To this circumstance may be attributed the alleged comparatively greater heating properties of coke or anthracite over bituminous coal."

"In an ordinary coal furnace the temperature is subjected to frequent and extreme variations. The generation of gas is greatest when the furnace is first charged, and therefore at its lowest temperature, and the quantity of air required for the perfect combustion of the fuel (which is constantly varying as the conditions of the charge vary) is not practically ascertainable, nor is it under control. The consequence is that one of two evils is constantly at work—either too much air is being admitted, causing smoke and carrying off both fuel and heat up the chimney, or else there is not enough air passing through the charge to convert the carbon into carbonic acid, resulting in the production of large volumes of carbonic oxide, which escape unconsumed producing only 4,325 units of heat per lb. of carbon instead of 14,500 units, which would be obtained were the the combustion of the carbon completed. A proof of the wasteful manner in which coal is generally consumed by steam users was obtained during the investigations made by the corporation of Birmingham about two years ago, when a propositiou was before them for laying power mains through their streets. Non-condensing engines of good type work with 2½ lbs. of coal per gross horse-power per hour, but it was found on indicating six engines of this class in Birmingham, taken incidentally, and ranging from 5 horse power to 30 horse power, that the average consumption was 18·1 lb. per horse power per hour, the highest being 27·5 lb. and the lowest 9·6 lb.

"Now, in firing with liquid fuel, the supply of fuel to the furnace being constant, and the fuel itself being homogeneous—that is to say, not consisting of volatile and non-volatile portions, as is the case with coal—the supply of air required is constant also, and the right amount is readily ascertainable by observing the chimney and so regulating the air inlets so as to allow a thin transparent smoke to be evolved. If there is no smoke, too much air may be passing, and carbonic oxide may be escaping: if, on the other hand, there is not enough air, the thick volumes of smoke given off indicate the fact in an unmistakable manner. With these advantages, it is not surprising to find that when properly consumed liquid fuel yields in practice a higher proportion of its theoretical value than coal. The author has carried out a great number of trials with various classes of liquid fuels in different kinds of furnaces during the last two years, and has now some fifty furnaces working on his system in this country. The system has been successfully applied to marine, locomotive, Cornish, Lancashire and to vertical boilers with or without crop tubes and to vertical boilers with Field tubes, to gas retorts, tar stills, steam superheaters, and brass melting furnaces, the average duty performed by the liquid fuel employed being from one and a half to two and a half times that of coal."

No wonder if the president and others, in view of the facts, predicted a great future for oil fuel. From the very comprehensive and interesting observations of Admiral Selwyn we must give an extract:

"He believed that the first person to use jets of any kind for liquid fuel was a certain Major Schapooski in Russia; but his patent was simply a table apparatus, and he had never carried out the operation on a large scale. The first persons, according to his knowledge, who had used the jet in a form in which it was really a success were Messrs. Wise, Field and Aydon. He believed that the next person was a Mr. Crow. Mr. Crow used one pipe over the other, one carrying steam and the other carrying oil. This apparatus had been in use ever since 1871, at the establishment of Messrs. Johnson & Matthey, the great metallurgists in Hatton Garden. By means of it they were able to melt platinum like lead. The next person who made an improvement was Mr. Donald, of the firm of Donald & Miller, chemical manufacturers, of Glasgow. This firm introduced the fire brick furnace which was an absolute necessity for the thorough burning of the hydrogen of the steam, which required a temperature of 4,000° F. The question of the production of oil in the country was of the greatest importance. Shale existed in this country in greater quantities than coal had ever been found. It existed right across England in beds 650 feet thick, and in some cases 1,100 feet thick, and it lay close to the surface. The development of a sufficient supply of oil to take the place of coal for the commercial marine would, however, be a slow affair. He proposed to turn his whole attention to the obtaining of English oil, so that everybody might rely upon being able to obtain a sufficient quantity, and until this was done he would not allow his apparatus to be used."

Admiral Selwyn takes the patriotic view of the question, but commerce is cosmopolitan and will not reject foreign oil while the distillation of our home supplies is delayed. Again:

"Admiral Selwyn said that there had been an experience of twenty years of the use of oil in every kind of boiler, and in no case had any damage been done to the boilers. The matter was one of constant experience, and not at all one of theory. For ten years the Russians had been running their ships across the Caspian and Black sea, with oil fuel, and they all said that they would never go back again to coal. They used a much lighter class of oil than we had in England, and the results showed that the oil fuel was only one-fourth the cost of coal, when space and weight saved, as well as other minor consequences, were taken into account.

"Mr. Mackie said that for about two years past he had seen the experiments which were carried out in London by Admiral Selwyn, and he could confirm what had been said as to the perfect combustion which had been obtained Rock oil and other liquid fuels required a philosophical mode of stoking. The rough method of throwing on the fuel, which was common in the case of coal, was not suitable for oil. There was no doubt that there was a quantity of shale in this country which would yield rock oil. There was no reason to doubt, either on account of the supply of oil, the perfection of the combustion, or the results obtained, that liquid fuel would be the fuel of the future."

Mr. Tarbutt in his reply said:

"Steam was certainly the most handy way of diffusing oil into the furnace in the state of spray; but unfortunately in the case of seagoing vessels, in which salt water had to be used to replace the steam so employed, there would be a danger of salting up the boilers. It was for that reason that he preferred the use of heated compressed air. He had been delighted with Admiral Selwyn's remarks as to the amount of oil which could be produced from the shale deposits in England. He was sure that Admiral Selwyn must be right in what he stated, as he had given much study to the subject, and that the oil would become available when it was required. He had had some experience in the use of tar for firing gas retorts. At some works the tar could not be sold for more than 3s a ton, and as it would do double the work of the same weight of coal, that would be equivalent to getting coal at 1s 6d a ton, which, he thought, was a desideratum.

"No doubt England owed her greatness to the fact of her iron deposits and her coal deposits being near to one another; but if liquid fuel was coming to the front it was of no use


# Harrison Bros. & Co. would respectfully ask the attention of the Trade to their

# NEW TUSCAN RED.

This is the finest, most brilliant and most permanent Tuscan Red that is to-day offered to the trade, and is manufactured solely by Harrison Bros. & Co., who are the only manufacturers of Tuscan Red in the United States. Any other Tuscan Red approaching this in brilliancy is artificially colored with anilines, from which this New Tuscan Red is absolutely free. Its permanence is so great that although its richness is due to organic coloring matter, it will stand a temperature of nearly 350° F., without being seriously affected in color; at 300° it is not at all affected; ordinary Tuscan Reds will commence to change color at 125°.

It is more permanent in sunlight than many mineral colors, and it is unhesitatingly offered as an exceptionally fine pigment for car and wagon painting, house painting, wall painting and all uses of the painter and decorative artist. It is prepared and sold in distemper, ground in oil and also ground for the uses of the coach painter. *Note particularly that the new red is labelled "New Tuscan Red;" that which is labelled simply "Tuscan Red" is the old style,*

**A TRIAL OF THIS NEW PIGMENT IS EARNESTLY SOLICITED.**

**HARRISON BROS. & CO.,**

**Philadelphia, New York and Cincinnati.**

## THE OPINION OF MASTER CAR PAINTERS.

MASTER CAR AND LOCOMOTIVE PAINTERS' ASSOCIATION OF THE UNITED STATES AND CANADA.

Secretary's Office, Kent, Ohio, February 17, 1888.

*Messrs. Harrison Bros. & Co., Philadelphia:*

Dear Sirs—I desire to acknowledge receipt, by express, of sample of your New Tuscan Red in japan, but I have delayed reporting on it until tested, which I have done in a practical way to my entire satisfaction, and am pleased with the color. I find it finely ground; it is of good body, and dries well; I added a tablespoonful of raw oil to one pound. It is certainly the best Tuscan Red I have handled in some years, and I have never had its equal in paste form.

Very truly yours, ROBERT MCKEON.

## THE OPINION OF MASTER HOUSE PAINTERS.

Office of HUNEKER & SON,
33 North 12th St., Phila.

December 8th, 1887.

*Messrs. Harrison Bros. & Co.:*

Gents—Regarding the "New Tuscan Red" we recently purchased from you, and on which you would like an opinion, we unhesitatingly consider it by far the best "Red" we have ever used.

Yours very truly,
HUNEKER & SON.

for Englishmen to bury their eyes in the sand, and say that oil was of no use because they had got coal. If ship owners could not run their ships at remunerative rates with coal, engineers must look beyond the selfish question, and see whether they could not make both ends meet by means of liquid fuel."

The president, in closing the discussion, dwelt on the importance of the large supplies of oil and residual matters becoming available in our own and other countries, but he evidently believes that coal has not yet shown all it can do, for he said:

"Science was progressive, and means would doubtless be found for using coal to increasingly great advantage. In the Engert boiler the coal was being used under a new set of conditions. So, he took it, it would be with liquid fuel, just as indeed it had been with gas. The more scientifically perfect the conditions the better would be the result, and although theoretically a fuel might only have a given value, yet practically by extraneous aids it might be made to give a higher result than that for which theory would be responsible."

Whether more oil is used or less coal is required for the production of the vast amount of force needful for the world's work, we who use wood fuel until we can get lignites or coal at prices which we can afford must benefit as science progresses in the direction indicated by Mr. Nursey. We submit that it is the duty of the Ceylon authorities, now that petroleum is abundant in the colony, to institute experiments with reference to the use of this substance instead of coal and wood in the furnaces of the railway and the government factory. The gas company might also find it worth while to try experiments with petroleum refuse.—*Tropical Agriculturist.*

## NOTICES.

THREE THOUSAND will buy lease and fixtures splendidly equipped Lubricating Oil Factory and valuable Stock Oils, this city, worth double amount. "BARGAIN," care this paper.

WANTED—An experienced Paris Green maker. Address, "PARIS GREEN," care this paper.

WANTED—By a varnish salesman with coach trade, $12,000 per year, *guaranteed* No bad bills; terms, expenses and commission 7 per cent. on gross sales.

Address "VARNISH," Care this paper.

WANTED—A partner in a wholesale Drug business already established and doing a business of between $30,000 and $40,000 a year. The store contains a well assorted stock and fixtures, worth about $25,000, and is centrally situated in a beautiful city of 20,000 inhabitants, in a middle Western State. The advertiser will sell one half interest to a first class party, in order to extend the business. Address "DRUG PARTNERSHIP," care of this paper.

A YOUNG MAN in the East has compounded a recipe for making an A1 shoe-blacking. Would like to enter into a partnership with some gentleman or firm in the West for manufacturing it on a large scale in some Western city. But a small amount of capital required, and profits large.

Address S. B., care of this paper.

ROGERS & PYATT, 80 Maiden Lane, New York. Manufacturers of Bleached Shellac and Spirit Varnishes.

WANTED by a foreign house an agent; also customers for anise-seed-oil. Address, "ANISE-SEED-OIL," care this paper.

## FOR RENT!!!

### "Water Power." "Water Power."

The nearest available water power to New York City, at Boonton, New Jersey.

Constant all the year round!!!

This magnificent water power will be leased in small or large quantities to suit the tenant. Suitable buildings erected for all kinds of manufacturing purposes. Splendid shipping facilities!!! On the line of Railroad and Canal. Only fifty minutes from New York City by train. This power will be leased at a great reduction on steam.

Address, LORD ESTATE, 68 Wall Street, New York.

**R. & W. R. WALKER,**
**KAURI GUM MERCHANTS**
**Fort St., Auckland, New Zealand.**
Cable address "Walnut," Auckland.
Bankers: The Bank of New Zealand,
A B C Code (4th edition) used.
CORRESPONDENCE SOLICITED.

FOR SALE OR RENT—Oil Refinery, advantageously located on deep water, near New York City, ample dock and railroad facilities. For particulars and terms, address "REFINERY," care this paper

BUCKLEY'S Golden Paint Shop for sale on account of death of owner. The place is known as "Golden Paint Shop," because it is gilded from top of house to cellar with gold leaf, and there is no other like it in the city.

Address, 335 9th Ave., Cor. 29th, St., New York City.

A MAN of 15 years' practical experience desires a position with a first class wholesale drug house. Drug and chemical buyer for present house. Age 30.

Address, "DRUGS," Care this paper.

## WANTED

**PRICES** on Technical, Photographic, and Pharmaceutical Chemicals from **Importing Houses.** Address confidentially, a large "out-of-town" dealer in pure chemicals,

**"SULPHITES,"** care of this office.

**DRUG STORE FOR SALE: A BARGAIN.**

Established in 1855, changed hands to present owners in 1867. Occupies center building in best block in a prosperous city of 15,000 in Illinois. Stock consists of Drugs, Oils, Paints and goods usually kept by wholesale druggists. With intention to sell, stock has been reduced from $25,000 to less than $10,000, including good fixtures and complete outfit for a large business. With seven railroads and navigation North, South and East and a large territory directly tributary here is offered an exceptional opportunity to an active business man to take right hold and reap the benefit of the fall trade. Stock alone or stock and storehouse can be had at a bargain and on easy terms. If interested consult C. G. F. MEYER of MEYER BROS. & Co., St. Louis; O. F. FULLER, of FULLER & FULLER Co., Chicago; GEORGE MCDONALD, Kalamazoo, Mich.

**GLASS** PHILLIP SEMMER & COMPANY. PLATE, SHEET & LOOKING GLASS Depot No 4.6.8 & 10 DESBROSSES ST. WRITE FOR QUOTATIONS. NEW YORK.

# Barrows, Savery Company

**S. Front & Reed Streets,**
**PHILADELPHIA.**

MANUFACTURE—

**Cast Iron Jacket Kettles,** Plain and Porcelain Lined, 20 to 100 gallons.
**Cast Iron Kettles,** 10 to 600 gallons.
**Cast Iron Retorts,** 20 to 60 gallons.
**Cast Iron Evaporators,** One pint to 30 gallons

# ADAMANTA VARNISH GUM

**For manufacture of durable and brilliant Varnishes, Japan, Enamel, &c.**

**Adamanta M'f'g. Co.,**
**17 MASON BUILDING, BOSTON.**

ESTABLISHED 1862.

**THE WEBB BLACK LEAD WORKS,**
**Office 99 Fulton St. Factory, Charlestown District.**

Importers of and Dealers in CEYLON PLUMBAGO and GERMAN BLACK LEAD. We keep in Stock different grades of PURE CEYLON PLUMBAGO prepared for the manufacture of *Crucibles, Powder, Shot, Lubricants, Steam Packing, Stove Polish, and for Stove Manufacturers and Stove Dealers.* We have facilities for furnishing any grade or quantity desired. Also German Lead "Lump and Powdered" for Foundry Facings.
ROBERT WEBB & CO., - - - BOSTON, MASS

**ESTABLISHED 1867.** Telegrams: "ELASTIKON," LIVERPOOL

# TO VARNISH MANUFACTURERS AND OTHERS.

## FINEST PITCH

**FOR VARNISH MAKING AND OTHER PURPOSES.**

This is a New Make of Pitch, and the very Finest Quality for Varnishes, &c.

**Samples and Lowest Prices on Application to**

**J. R. PEACE & CO.**
(Oil, Grease, Tallow & Pitch Merchants),
**26 ALEXANDRA BUILDINGS, ORMOND STREET.**
**orrespondence Solicited.** **LIVERPOOL, England.**

W. C. DePAUW, Proprietor. N. T. DePAUW, Manager.

# DePAUW'S AMERICAN PLATE GLASS WORKS,

MANUFACTURE

# Polished AND Rough Plate Glass,

**Also Single and Double Strength Window Glass, Fruit Jars and Chemicals**
Estimates furnished promptly on application.

OFFICE, NEW ALBANY, IND. REFINERIES, NEW ALBANY, IND., and LOUISVILLE, KY.

*NEW YORK OFFICE, 8 & 10 DESBROSSES ST.* **PHILLIP SEMMER, Agent**

# W. & H. WALKER

REFINERS OF

# PURE COTTONSEED OILS,

MINERS' OILS,
WINTER AND SUMMER YELLOW COTTON OILS,
WINTER AND SUMMER WHITE COTTON OILS.
**SALAD OILS A SPECIALTY.**

**ALSO MANUFACTURERS OF**
SOAPS, STAR and ADAMANTINE CANDLES,
SAPONIFIED RED OIL, TALLOW OILS
and CRUDE GLYCERINE.

Office and Works, **PITTSBURGH, Pa.**

# S. P. SHOTTER & CO.,

Dealers in

**SPIRITS TURPENTINE AND ROSIN,**
**TAR OIL. GUM THUS.**
**VENICE TURPENTINE.**

# ALL GRADES OF ROSIN OIL.

FOR

**CURRIERS' OILS, LUBRICATING OILS,**
**PRINTING INK OILS, PAINT OILS.**

We desire to call attention to our

# Deodorized Rosin Oil,

Refined gravity 11 deg. and fire test 375 deg., guaranteed absolutely odorless.

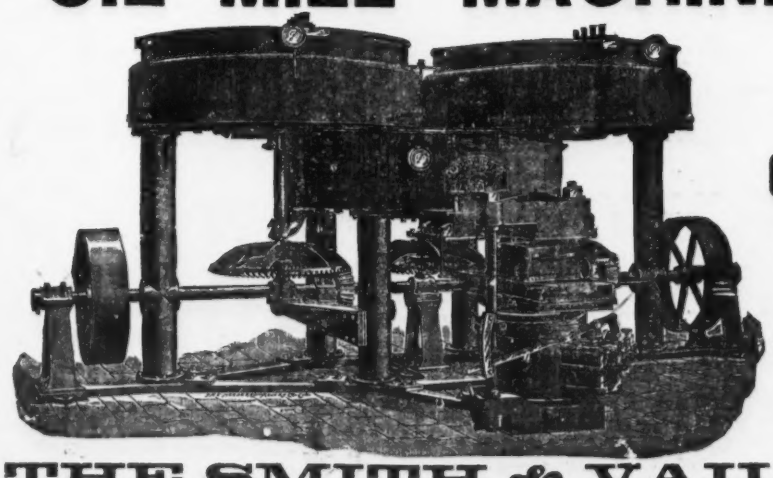
**SEND FOR SAMPLES AND PRICES.**

CHICAGO OFFICE:
**56 Dearborn Street,**

PRINCIPAL OFFICE:
**Savannah, Ga.**

**NEW ORLEANS OFFICE: 54 MAGAZINE STREET.**

# OIL MILL MACHINERY A SPECIALTY.



OUR IMPROVED CHILLED CRUSHER ROLLS

Of Three, Four or Five Rolls to a Stack, for

COTTON and LINSEED Guaranteed the

**Most complete Machines in this Market.**

—ALSO—

Improved Presses, Steam Cake Formers, Triple Combination Heaters, Hydraulic Pressure Pumps, Cottonseed Hullers

**THE SMITH & VAILE CO., DAYTON O.**

Photographs Sent upon Application. Correspondence Solicited.

# Pennsylvania White Lead Co.,

ESTABLISHED 1844. INCORPORATED 1887.

—SUCCESSORS TO—

C. F. WELLS & CO., formerly B. A. Fahnestock & Co.,

PITTSBURGH, PENN.

MANUFACTURERS OF

Each package of the original B. A. FAHNESTOCK LEAD now bears a gilt tablet of which the above is a fac simile.

I. H. WILEY & CO., Boston, Mass., Wholesale Agents for New England.

---

TREMONT PAINT WORKS
BATTERYMARCH ST. BOSTON, MASS
ESTABLISHED 1849

JOHN BRIGGS & CO.,

Proprietors of the Celebrated

Dolson White Lead.

Manufacturers of

PUTTY,

*HOUSE, SHIP and COACH COLORS*

READY MIXED PAINT, TINTED WHITE LEAD.

French & American Zincs, WHITING, OCHRES, &c., &c.

---

M. C. BABCOCK. W. T. JENKINS.

# BABCOCK VARNISH CO.

Manufacturers of:

# Coach Varnishes.

Factory: 156 Western Ave., Brighton Dist.

P. O. Box 2958, BOSTON MASS.

---

# THE ULSTER LEAD CO.,

SAUGERTIES, ULSTER CO., N. Y.

Manufacturers of

Pure White Lead,

OFFICE

163 Front Street, New York.

AGENTS FOR NEW ENGLAND,

GOULD & COMPANY, Boston.

---

# CARTER WHITE LEAD CO., OMAHA, NEB.

$100 FORFEIT

IF THE CARTER WHITE LEAD DOES NOT COVER ONE-THIRD MORE SURFACE THAN ANY OTHER WHITE LEAD IN THE MARKET.

TO THE TRADE:

We take pleasure in informing you that we have opened an office and warehouse in New York City, at No. 5 Dutch Street, between Fulton and John Streets, where we shall carry a full stock of White Lead. This step has been necessitated by the increasing demand for our product by the trade in the South and East, requiring facilities for securing our Lead more promptly than it was possible for us to deliver it from Omaha. We request our friends in the Atlantic Coast States to send their orders in future to this office, where they will have prompt attention.

Prices and terms will be gladly given on application, also will send a small sample keg to parties desiring to make a test in a practical manner.

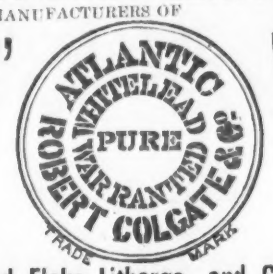
C. P. COGGESHALL, President Agent.

CARTER WHITE LEAD CO., No. 5 Dutch Street, New York

---

# Atlantic White Lead and Linseed Oil Co.

MANUFACTURERS OF

"Atlantic" 

White Lead.

Pure

Red Lead, Powdered and Flake Litharge, and Glass-House Lead.

ALSO

Refined Glass-House Lead

Especially adapted for the manufacture of the FINEST QUALITIES OF GLASS, and we guarantee its UNIFORMITY.

LINSEED OIL,

RAW, BOILED AND REFINED.

Also a Superior Grade especially adapted for Varnish Makers' use.

Address, ATLANTIC WHITE LEAD & LINSEED OIL CO.

287 Pearl Street, NEW YORK.

---

COLLIER

# WHITE LEAD AND OIL CO.,

ST. LOUIS, MO.,

MANUFACTURERS OF

# Strictly Pure White Lead.

Red Lead and Litharge,

Lead Pipe, Sheet Lead, Bar Lead.

CHEMICAL SHEET LEAD,

Linseed and Castor Oils and Glaziers' Lead.

---

# NATIONAL LINSEED OIL COMPANY,

Selling and Purchasing Agents for

# Linseed Oil Manufacturers

PURE LINSEED OIL,

Raw, Boiled and Refined always on hand. Delivered in BARRELS or TANK CARS. OIL CAKE for Export and Domestic Use.

CORRESPONDENCE SOLICITED.

Office, 185 Dearborn Street, CHICAGO, ILL.

---

# MAXWELL WHITE LEAD CO.,

MANUFACTURERS OF

# Non-Poisonous White Lead

DRY AND IN OIL.

EASTERN DEPARTMENT, T. B. SIMS, Manager, 71 BROADWAY, NEW YORK.

CHICAGO OFFICE, Pacific Junction COOK CO., ILL

---

# "The Best Burr Stone Mill in the World"

FOR

Grinding White Lead, Ready-Mixed Paints,

Coach and Artists' Colors, Printing Ink, Axle Grease, Chocolate, etc.

WATER COOL PAINT MILLS

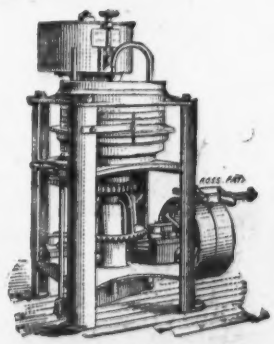
SINGLE AND IN GANGS.

Druggist and Ore Sampling Mills.

ALL KINDS OF

MIXING AND SIFTING MACHINERY

And Mills for Flour, Feed, Drugs, Chemicals, Spices, Dyestuffs, Dry Paint, etc.



SINGLE WATER COOL MILL.

CHARLES ROSS, Jr.,

31 & 33 South Fifth Street, Brooklyn, E. D., N. Y.

Write for Particulars.

## PAINT MARKET.

**Note**—*Our prices are for large lots except when otherwise specified, and buyers of small quantities must expect to pay an advance on these figures.*

*The prices current will be found on page 49.*

TUESDAY EVENING, Sept. 4, 1888.

### White Lead, Zinc, Etc.

Pig lead has continued to advance under the pressure of speculative buying, nearly all of which was done on the account of one operator, who is aiming to get control of the market. September and October were the favorite months. It is intimated that the bears are likely to get badly squeezed this time. The close was at 4 90 bid. Messrs. Everett & Post write from Chicago on the 1st inst., Early in the week sales were made at 4¼c but the market has steadily advanced to sales at 4 65c, and to-day 4 60c to 4 65c is the going price here with only limited offerings. At St. Louis the week's sales represent about 1,800 tons, at prices advancing from 4 45c to 4 65c, Fully 85 per cent of the purchases have been for speculative account. With the close of the week the current asking price is 4 65c and very firm at that."

White lead does not participate in the improvement in the pig metal. Competition is too keen to admit of any appreciable increase in prices, even upon such ground as the highly enhanced cost of raw material. While for the leading Eastern brands 5 60c net is the inside price, Western brands are said to be procurable at 5@5 12½ net. The consuming demand is reported to be good, but buyers are satisfying their current requirements only.

American Oxide of Zinc is without special feature, with the trading reported as of moderate jobbing proportions. Quotations are unchanged, at 4¼@4¾c according to quality. French zincs have been stationary at 5¾c for dry Antwerp red seal in bbls. of 220½ lbs; Paris red seal 6⅞c, and 7¼c for Paris green seal. Discounts on French are as follows: To buyers of 10 bbl. lots of one or assorted grades 1 %, 25 bbls 2 % and 50 bbls 4 %. No discount is allowed on less than 10-bbl lots, and discounts include brokerage.

### Dry Colors.

REDS.

A jobbing business has been doing in the market for dry colors, which is characterized, by dealers, as moderate, without special features. English Venetian reds have sold in jobbing lots at previous quotations, but there is an absence of important transactions. Prices are quoted at last week's figures, namely; $1 45 @1 50 for special brands in large lots, while other grades in smaller quantities are selling at $1 35@1 45. Domestics have been inquired for to a moderate extent, with the market ruling steady at our former quotations of 90c@$1 05 for ordinary grades, while some special brands are held at $1 20@1 25, according to maker and size of order.

Red Lead and Litharge—Have been selling to a moderate degree in a jobbing way, but nothing of any moment can be noted. Quotations for the former are 6@6¼c, and for the latter 5½@5¾c.

Cobalt Oxide—Has continued to rule quiet, the business being small and wholly without interesting features. Our quotations of a week ago continue to rule at $2 90 for prepared and $2 50 for black.

Orange mineral.—Owing to scarcity of available stocks, business has been restricted somewhat, and but little of importance can be noted. The following figures are ruling: 8¼ @9c for English, French at 8¾@9¼c, and German at 8½@9c, Domestics are in moderate request, and are quoted firm at 8@8¼c, as to quantity and quality.

Carmine continues without special feature. Stocks have been taken moderately, all orders being of a jobbing character, exciting no attention. The market is quoted steady at $3 15 for round lots, and $3 25@3 35 for smaller quantities, as to size of order and style of packing, which figures were agreed upon by the manufacturers some time ago.

Quicksilver Vermilion.—A meeting of the manufacturers was held on last Friday afternoon, and as a result of their deliberations, a circular was issued announcing that the article had been reduced 3c per pound. This occasioned some surprise, in the face of the fact that quicksilver is exceedingly firm and higher, The manufacturers are reticent as to their reasons for reducing the price, but it is rumored that it was done with the idea of discouraging outside competition. The prices as now revised are 57c per pound for 100 pound kegs or over, and 58c for kegs of from 50 to 50 pounds.

BLUES.

But little of interest can be noted in the market for blue pigments. Trading has continued moderate, with no apparent activity, however, and values are identical with a week ago. The quotations continue at the following rates: Prussian blues continue to be quoted at 25@30c, according to quality, etc., while the asking figures for Chinese are 48½@50c. The other blues are at our previous figures and are quoted steady.

YELLOWS

N. M. B. ochers are reported as very scarce on spot. There are supplies afloat but they are all sold to arrive. The nominal quotation is $1 35. A pretty fair demand can be noted for French washed, and some few sales, in moderate quantities are reported at from 2@4c according to quality. On domestic a fair demand is noted with sales of 359 bbls at previous figures.

GREENS.

Green pigments are rather quiet, with only sales in a small jobbing way reported at our former quotations. Paris has continued to sell to a moderate extent, but, as has been stated, the business is now over, and only small orders are being received. The Association rates continue as follows:

Arsenic, kegs or casks, 18¾c; kegs, 100 to 150 lbs, 19¼c; 14, 28 and 56 lb iron cans or boxes net weight only, 20¾c; 2 to 5 lb paper boxes, 20¾c; 1 lb paper boxes, 21¼c; ½ lb paper boxes, 23¾c; ¼ lb paper boxes, 25¼c. Free on board at New York, Philadelphia, Boston or Springfield, Mass. On all sales made by jobbers from points west of the Alleghanies and New York State and in the Southern States, not less than ½c per pound must be added. Terms, payable July 1st, 1888. Discount 6 per cent per annum for unexpired time. No brokerage or commission allowed to buyers. Rebates subject to rules and regulations made in conformity with the request of the National Wholesale Druggists' Association. To buyers of pure paris green, purchased from manufacturers who have conformed with the desire of the Druggists' Association, of 500 to 1,000 lbs during the season, ½c per lb; of 1,000 to 2,000 lbs, 1c per lb; of 2,000 to 4,000 lbs, 1½c per lb; of 4,000 to 10,000 lbs, 2c per lb; of 10,000 lbs and over, 2½c per lb. To buyers of 5 tons or over,


THE JEWETT WHITE LEAD CO., 28 Burling Slip, NEW YORK.

JEWETT & SONS PERFECTLY PURE WHITE LEAD TRADE MARK

J. A. DEAN & CO., LINSEED OIL, AND LINSEED CAKE. 181 Front Street, New York

J.A. DEAN & Co PERFECTLY PURE LINSEED OIL

The Beymer-Bauman Lead Co., CORRODERS AND MANUFACTURERS OF WHITE LEAD, DRY AND IN OIL. ESTABLISHED 1867.

BEYMER, BAUMAN & CO. STRICTLY PURE WHITE LEAD PITTSBURGH

Red Lead, Litharge & Orange Mineral Of Superior Quality, made with Natural Gas Fuel rendering them Absolutely Free from Sulphur. Office, Hamilton Building, 91 Fifth Avenue, PITTSBURGH, PA. INCORPORATED 1887. Boston Branch, DEXTER BROS., 57 Broad S

SUCCESSORS TO Mordecai Lewis, Established 1772.

We are prepared to supply the Trade promptly, with our long established and reliable brand of Pure White Lead IN OIL, unsurpassed for whiteness, fineness and body. ALSO

JOHN T. LEWIS & BROS. WARRANTED PURE WHITE LEAD. PHILADA. TRADE MARK.

Painters' Colors Orange Mineral, Red Lead, and Litharge Oxides FOR Varnish Maker and others Requiring Pure Goods A SPECIALTY. LINSEED OIL, Raw, Boiled and Refined.

Anchor White Lead Co., CINCINNATI, Pure White Lead. RED LEAD, LITHARGE

ANCHOR WHITE LEAD WORKS GOSHORN BRO'S. PURE CINCINNATI, O. Estbalished 1828

Agents for New England. E. & F. KING & CO Boston

To Paint Grinders. POWDERED DROP BLACK FINEST GROUND Article ever offered to the Trade. Reduces cost of grinding in Oil or Japan to one-half or one-third. For Samples and Prices, address HARRISON BROS. & CO., PHILADELPHIA.

C. H. HOWELL & CO., Color Makers 99 Malden Lane, New York. 212 214 & 216 Race St., Phila, Pa

THE Bradley White Lead Company, 174 Front Street, BROOKLYN, N. Y.

BROOKLYN WHITE LEAD CO ESTABLISHED 1825. 174 Front St., BROOKLYN, N. Y.

TRADE MARK

AGENTS FOR Sissons Brothers & Co., HULL, ENG., Manufacturers GOLDEN OCHRE, PARIS WHITE PATENT DRYER, INDIAN RED, TUSCAN RED, VENEIAN RED AND COLORS.

Lee Smith & Co 59 Frankfort St., & 19, 21 & 23 Jacob St., N. Y.

AGENTS FOR Henry Grace & Co., LONDON, MANUFACTURERS OF WHITE LEAD, ETC.

PAINTS FOR GRINDERS' USE. IMPORTERS OF English White Lead, Ochres, Umbers, Siennas, Indian and Venetian Reds, and China Clay, V. M., French Zinc, Refined Yellow Beeswax. We claim to have Our Paints for Grinders, of the Best Quality and Most Finely Praepared.

# TAKE NOTICE.

That the names **"Refined,"** and **"Floated,"** and **"Cream Floated,"** by which the Trade identifies certain articles of commerce, are our registered **Trade-Marks.** The Director of the United States Geological Survey and Chief of Division of Mining Statistics, in the latest Official Report, issued at Washington, D. C., 1885, on page 922, under head of Minneral Paints, after reporting that American Barytes is softer and better than the foreign, and that the State of Missouri ranks first in the production of the American ore, continues the Report in the following words and commas, namely:—

"At St. Louis, Missouri, the Page & Krausse Manufacturing & Mining Company prepare a 'floated barytes' which is in considerable demand. This variety of barytes is found to be much finer than that which is simply ground."

Having invented the processes of manufacture which have made the said articles so popular, and having introduced and popularized them under the names aforesaid, and having for many years publicly advertised these facts, we have *lawful property* in said names. And on any goods, invoice, or quotation but ours, they are a *prima facie* fraud.

**Page & Krausse Mfg. & Mining Co.**

---

The Largest Works in the World.

**Established 1849.**

# L. MARTIN & CO.,

**226 Walnut St., Philadelphia, Pa., U. S. A.**

**2nd Floor Front.**

MANUFACTURERS OF

# LAMP BLACK

**OF ALL GRADES,**

**AND**

# Patent Hydro-Carbon Gas Black.

*SILVER MEDALS awarded by the Franklin Institute, 1852; Massachusetts Charitable Mechanics Association, Boston, 1860; American Institute, New York, 1867; and Franklin Institute, November, 1874; also Diploma and Medal by International Exhibition, Philadelphia, 1876.*

**Beware of Fraudulent Imitations.** **All our Brands are Registered.**

Sole Agents and Correspondents for

THE PHŒNIX CARBON CO., LUDLOW AND KANE, PA.

E. H. MURDOCK & CO., CINCINNATI, O.

---

# J. C. FINCK & CO.,

**Manufacturers of**

# Water Floated Barytes

**REFINED AND SECONDS.**

**Carbonate of Lime, Marble Dust,**
**Putty Powder, "VOLATILE" Soap Filler.**

# ST. LOUIS, MO.

**Office, No. 101 Barton St.** **Works, on St. L., I. M. & S. R. R**

**CORRESPONDENCE SOLICITED.**

---

THE J. H. MORLEY LEAD CO.,

ESTABLISHED 1862.

**Corroders and Manufacturers**

**—OF—**

# WHITE LEAD,

**RED LEAD AND LITHARGE.**

**CLEVELAND, OHIO.**

J. H. MORLEY & CO. STRICTLY PURE WHITE LEAD CLEVELAND.

INCORPORATED 1887.

AGENTS FOR NEW ENGLAND,

**A. L. CUTLER & CO., Boston, Mass.**

---

CHARLES MOSER. FRED. RENNER.

# CHARLES MOSER & CO.,

**59-63 Main St., CINCINNATI, O.** **254 Pearl St. NEW YORK.**

MANUFACTURERS OF

# COLORS,

**DRY, IN OIL AND JAPAN AND PULP.**

## ARTISTS' OIL COLORS

IN PATENT COLLAPSABLE TUBES.

## White Lead and Zinc White

THE CELEBRATED

## "Economy" Ready Mixed Paints,

## QUICK DRYING CARRIAGE PAINTS,

**ETC., ETC.**

**Agents for our Tube Colors**

**FOR THE PACIFIC STATES,**

SULLIVAN, KELLY & CO., San Francisco, Cal.

---

**GEO. F. TAYLOR,**

**General Commission Merchant and Broker in GLUE, Fertilizer Chemicals and Materials, Bone Black, Tallow, Etc.**

**134 Water Street, NEW YORK.**

---

# CARBON BLACK

MANUFACTURED BY

**GODFREY L. CABOT, Worthington, Pa.**

GAS ECLIPSE BLACK — TRADE MARK.

**DARKEST** In Color. **SOFTEST** In Texture. **LIGHTEST** In Weight.

WRITE FOR SAMPLE.

GAS ECLIPSE BLACK — TRADE MARK.

---

# NOLEN & BOARDMAN

SUCCESSORS TO CARBON BLACK CO.

## CARBON GAS BLACK

PURE HYDRO-CARBON GAS BLACK MADE BY THE NOLEN & BOARDMAN CO. NEW YORK

MADE UNDER LETTERS PAT. OF SEPT. 1872, MAR. 1875, MAY 1881.

5 BEEKMAN ST. TEMPLE COURT. ROOM 171. NEW YORK.

---

DETROIT WHITE LEAD WORKS INCORPORATED DEC. 22d. 1880. SEAL

**PAINT YOUR BUGGY FOR**

## ONE DOLLAR!

—WITH—

## DETROIT WHITE LEAD WORKS'

**CARRIAGE BLACK.**

If you wis your gear in color, use our WINI COLOR, VERMILION, YELLOW or GREEN.

The original and best Ready-Mixed, Varnish Gloss,

# CARRIAGE PAINTS.

**Four Years Uninterrupted Success and not a Single Complaint**

---

# COLORS FOR GRINDERS AND MANUFACTURERS.

**LOW PRICES.** **BEST QUALITY.**

## JOHN LUCAS & CO.,

Philadelphia: 141 & 142 N. 4th St. 322 to 330 Race St.

WM. E. LUCAS, 69 Maiden Lane New York.

at one time, an additional rebate of ¼c per lb will be allowed.

### Miscellaneous.

Sulphate of barytes has continued rather quiet throughout the week and the business doing has been of limited proportions. The market is bare of items of interest. Quotations are unchanged at $21 50 for special brands of imported, best No. 1 at $17 50@18 50, according to quantity; best off-colored grades at $15; No. 2 at $14 and No. 3 at $12.

China Clay—There is a continued scarcity of the low and medium grades. There is some little demand on these kinds, but the absence of stocks prevents any actual business, except in the parcels to arrive. There is a vessel now due with supplies. On the higher grade there is a moderate demand, with a medium stock on hand. The quotations are $13 50 for low grade, $16 for medium and $18 for the higher qualities.

Chalk is practically unchanged from last week. Stocks are in sufficient supply to keep manufacturers going until the arrivals of vessels. Jobbing parcels have been disposed of but we do not hear of any large transactions being consummated. Nominal quotations are $3 50.

Talc is in good supply, with the demand reported as fair for the season. American is selling at 1½c for the better grade, to ½@1c for lower grades. For foreign 1¼@1¾c is asked.

Terra Alba—French is exceedingly scarce, and as a consequence quotations are given with some firmness. American is in sufficient supply for all wants, but there is no special demand for either the foreign or domestic article. French is stiff at 85c on spot and 75@80c to arrive. American may be obtained from $9.00@15.00, according to quality.

Whiting—Manufacturers are still working to their full capacity; there is a continued good demand, and in several instances it was exceedingly difficult to obtain supplies during the past week. The market is very strong at 45@52c for commercial and 60@65c for gilders'.

### Glues.

Dealers report rather a better feeling in the glue market, and the business during the past week has perceptibly increased. As regards quotations they are unchanged, and the market is devoid of interesting features.

### Glass.

WINDOW GLASS.

There are no special features in this department to be recorded this week. Business improves slowly while prices remain as heretofore. The discounts are 75 and 5@75 and 10 per cent. on American, as to quantity, while on French they are 70, 10 and 5% to buyers of 25 boxes or less, with an extra discount of 5% on purchases of 26 to 200 boxes, and 10% on purchases of 201 boxes or more, provided that the purchases have been made during the calendar month. It is immaterial whether purchases are confined to one house or distributed among all the importers.

PLATE GLASS.

The demand for plate glass improves slowly, buyers being in no hurry to secure supplies. Values are still unsettled but there has been no quotable change.

We have received too late for insertion in this issue a full expose of the swindler who has been annoying the white lead trade o many years. He appears to have taken a new departure having been operating recently among the hardware dealers in Western Pennsylvania and New York, and probably designs to continue to work that branch of trade all over the country.

### Window-glass Factories to Reopen October 8.

A special meeting of the Window-glass Manufacturers' Beneficial Association was held last week in Pittsburg. The object of the gathering was to decide whether or not to change the date of the annual resumption of work and blow in the fires before October 8. There was a large attendance of members. Every factory in the West was represented. It was decided not to change the date at present, but another meeting will be held Sept. 13, when the matter will be definitely settled.

At a meeting in Chicago several weeks ago the time for the opening of the factories was made October 8. The manufacturers of the East, who are organized in another association, refused to wait this long, and a number of them wished to resume about September 15. Several of the Pittsburgh manufacturers argued that if the Eastern houses resumed on the 15th they would be enabled to secure the cream of the trade and shut the Western men out of the e ma rket. On this account it was thought best to start up before October 8.

At the meeting last week strong speeches were made favoring a close-down until the 8th. It was stated that if the factories would not resume before that time prices could be maintained in the West. If the Pittsburgh people started up on the 15th it would throw so much more glass on a stagnant market and prices would be broken. The trade at present is very dull and there is a great amount of stock on hand. It was argued that if the Eastern manufacturers wished to resume this month they should be allowed to do so with-

(Continued on page 20.)


RUTHERFORD'S
METALLIC BROWN.
Guaranteed the Best Paint in the market for TIN, IRON AND WOOD.

Contains No Grit.
Unequalled in Fineness.
For Dealers' and Grinders' Use.
RUTHERFORD & BARCLAY,
MINERS AND MANUFACTURERS,
305 Chestnut St. Philadelphia.
77 Maiden Lane, New York.

Established 1874.
PEART BROTHERS
LIQUID PAINT M'f'rs
Corning, N. Y.
The Pioneer Paint Manufacturers of Western New York.

Red Oxide of Iron.
Warranted Unequalled in Body, Strength and Fineness.
65 Per Cent. Iron and Free From Sulphur.
Grinds smoothly with 18 lbs. oil to 100 lbs. oxide.
CLINTON RED HEMATITE,
For coloring Mortar, Brick, Tile, etc., equal to Turkey and Florentine Red.
The Clinton Metallic Paint Co.,
CLINTON, N. Y.
229 PEARL ST., NEW YORK,
Agents for Mortar Color in Boston:
FISKE, COLEMAN & CO., 62 Congress St

GABRIEL & SCHALL,
IMPORTERS OF
CRUDE AND POWDERED (SWOOD) BARYTES,
Dry Colors, Blanc-fixe, Chloride of Barium, Nitrate of Barytes, and Strontian, Borate of Manganese, Portland Cement, Asphalt Mastic, Fire Bricks, &c.
205 PEARL ST., NEW YORK.

PRINCE'S METALLIC PAINT COMPANY.
(INCORPORATED.)
DAVID PRINCE, Secretary and Treasurer,
71 Maiden Lane, NEW YORK.

A. C. PRINCE, President.
DANID PRINCE, Sec'y and Treas.
(Sons of the late ROBERT PRINCE, Original Manufacturer.)
The Prince M'f'g Co.,
71 Maiden Lane, NEW YORK.
SOLE MANUFACTURERS OF

TRADE MARK.

TRADE MARK.
ESTABLISHED 1858.
An Indestructible Coating for TIN, IRON and WOOD.
BUT ONE COLOR MADE
BROWN.

VANHORNE, GRIFFEN & CO.,
IMPORTERS OF
FRENCH WINDOW GLASS and GERMAN LOOKING GLASS PLATES.
MANUFACTURERS OF BENT GLASS.
131-137 Franklin St., New York.

Manufacturers of
COLORS
Dry, in Pulp, in Japan, in Oil and in Distemper. &c.
SOLE MANUFACTURERS OF
Maple Leaf Permanent Green,
Peninsular Permanent Red,
Peninsular Non-Corrosive Steel Color Paints.
Peninsular Wood & Iron Fillers.
FACTORY.
Lieb St. from Transit R. R. to River Front.
Special inducements offered to large buyers on Vermilions, Chrome Greens and Yellows, Prussian, Chinese, Steel and Soluble Blues, Paris Green, Etc.
Correspondence Solicited.
Farrand, Williams & Co., Detroit,
General Agents.

Established 1836.
JOHN J. BUDD,
MANUFACTURER OF
WHITING FRESCO, PUTTY, &c.
149 Bank Street, New York City.
For 1st Coat, one pint of water to a Pound.
For Whitening and Coloring Walls, Ceilings, etc.
Mix with hot water and use when cool.
MANUFACTURER
JOHN J. BUDD, FRESCO 149 BANK ST. N.Y.
Registered TRADE MARK.
For 2d Coat, one pint and a half of water to a pound.
Correspondence Solicited.

RICKARD & HEWITT,
Grinders and Manufacturers of
"NANTAHELA" TALC.
E. O. MURDOCK & CO., 104 John St., N. Y.
[SOLE AGENTS.]
Quotations and Samples on Application.

R. J. WADDELL & CO.,
52 Beekman Street, NEW YORK.
HOYLE, ROBSON & CO. Newcastle, England.
M. H. F.V.A. Venetian Red
BRIGHT OXIDE, INDIAN RED, TUSCAN RED, DROP AND IVORY BLACKS, &c

W. E. CUTTER & CO.,
Manufacturers of
VENETIAN REDS
WORCESTER MASS.
ALFRED K. PRINCE, 71 Maiden Lane, N. Y.
SOLE AGENTS FOR
NEW YORK and PHILADELPHIA.

BILLINGS, TAYLOR & CO.,
FOOT CASE AVE., CLEVELAND, O.
16 PLATT ST., NEW YORK.
MANUFACTURERS OF
DRY COLORS.
A. A. VERMILION, (Perfect imitation of Eng. Vermilion.)
ORIENTAL VERMILION,
PERSIAN RED,
IMP'D AMERICAN VERMILION AND VERMILION OF LOWER QUALITIES,
CHROME YELLOW, all qualities.
FRENCH STANDARD GREENS all shades.
CHROME GREEN, all shades,
PURE CHINESE BLUE,
PURE PRUSSIAN BLUE.
FULL LINE OF SUPERFINE COACH COLORS,
and COACH, CARRIAGE and CAR VARNISHES.
OIL WOOD STAINS: Old Oak, Mahogany, Cherry, Cocobola, Walnut, Rosewood, Ebony, O Colors, Mixed Paints, Tin ed Paints in paste form.
Descriptive Circulars and Samples furnished on application

# Estate of J. P. Barnett

Importer and Manufacturer of Colors.

—SPECIALTIES.—

**Chrome Yellows, Chrome Greens,**
**Chinese Blue, Prussian Blue,**
**Soluble Blue, Steel Blue,**
**Rose Pink, Lakes & Ruboide Vermilions,**
**Lowe's Carbolic & Cresylic Acids.**

NEW YORK OFFICE, 84 William Street.

MAIN OFFICE AND FACTORY, 278 Passaic Street, Newark, N. J.

---

**Established 1807.**

Manhattanville Color Works,

# D. F. TIEMANN & CO.

MANUFACTURERS OF

"English," or "California" **Quicksilver Vermilion,**
**Pure No. 40 Carmine,**
**Soluble Blue, Paints and Colors,**
**Dry, in Oil, and in distemper,**
**Colors for Paint Grinders a Specialty.**

Office, 18 MURRAY ST., 19 PARK PLACE; Factories, MANHATTANVILLE, NEW YORK.

---

WILLIAMSBURG PAINT & COLOR WORKS.

# EDWARD HORE,

MANUFACTURER AND IMPORTER OF

# COLORS.

**Vermilions, Lakes, &c.**

Specialties for Grinders, Paper Mfrs., Tissue Printers, ETC.

FACTORIES, BROOKLYN, L. I. Chas. E. Hore, Supt.

OFFICE, 62-68 NORTH 11th ST. Brooklyn, E. D.

---

THE particular attention of paint and varnish manufacturers and users of these articles is directed to a very useful book entitled "*Painting and Painters' Materials*" by Charles L. Condit, which treats of Oils, Pigments, Varnishes, Driers, etc., in a thorough manner. This is the only book treating these subjects upon the basis of scientific investigations made in Holland, Germany and France. Send $2.25 to this office and we will mail a copy at once.

---

# A. B. ANSBACHER & CO.

**139 Lake St., CHICAGO, ILL.**

**4 Murray St., NEW YORK.**

# DRY COLORS!

Vermilions, Carmines, Chrome Greens and Chrome Yellows,
Prussian, Chinese and Soluble Blues, "Cardinal"
the favorite English Vermilion substitute,
Ultramarines, Lakes,
Bronze Powders, &c.

## Pure Colors for Grinders a Specialty.

[Write for Samples and Quotations]

---

# W. C. POPE & CO.,

# VARNISH GUMS,

174 HIGH STREET, BOSTON.

**Sole Agents in the U. S. for**

**Adamanta Varnish Gum.**

---

**Strictly Pure Paris Green.**

**QUICKSILVER VERMILION.**

CHROME GREENS AND YELLOWS.

**CARMINE.**

**SOLUBLE** CHINESE AND PRUSSIAN BLUES.

Bronze Powders.

**S. & A. London Gold Paint.**

SONDHEIM, ALSBERG & CO. 54 MAIDEN LANE, NEW YORK. FACTORY, BROOKLYN.

---

ESTABLISHED 1857.

**THE BURCEY CHEMICAL CO.'S**

# DIAMOND METHAL

**AND REFINED**

# WOOD ALCOHOL.

Perfect substitutes for Grain Alcohol for all mechanical purposes.

## Binghamton, N. Y.

**AGENTS:**

WM. S. GRAY, 109 Maiden Lane, New York | M. L BARRETT, 56 & 58 Wabash Ave., Chicago
WM. H. SWIFT & CO., 117 Milk St., Boston.

---

# Genuine French Orange Mineral.

**TOURS' BRAND.**

Is the Finest, most Brilliant and Lasting in the World for Vermilion Manufacturers, &c.

SOLE AGENT FOR THE UNITED STATES,

**F. A. REICHARD, 15 Platt St., N. Y.**

---

ESTABLISHED 1836.

# S. ADLER & SONS,

*MANUFACTURERS OF THE*

**S. S. F. Strictly Pure**

# Paris Green,

Chrome Greens & Yellows, Chinese, Prussian & Soluble Blues.

*ALSO SOLE MANUFACTURERS OF THE CELEBRATED*

## MAGNESIA GREEN,

Corner Maiden Lane & Pearl St., **NEW YORK.**

**Chicago Branch, 201 Randolph Street.**

# French Auxerres Ochres.

We offer direct shipment from the works, at Manufacturers figures, Messrs. Parquin Gauchery & Zagorowski, Auxerre, Burgundy, French Ochres **J. C., J. C. L., J. C. L. S., J. F., J. F. L.** and **J. F. L. S.** in lots to suit.

## DOGGETT BROS.,

BROKERS AND MANUFACTURERS' AGENTS IN

## PAINTS, OILS AND CHEMICALS,

**138 & 140 Maiden Lane, New York.**
**65 No. Front Street, Philadelphia,**
**196 La Salle Street, Chicago.**

*Special Correspondents in all the principal domestic and foreign markets.*

**Manufacturers' Selling Agents for Linseed and Cottonseed Oils, Foreign and Domestic Umbers, Ochres and Siennas, Paint and Color, Oil Cloth, Paper and Wall Paper Manufacturers' Supplies and Clays a specialty.**

---

## HAMPDEN PERMANENT GREENS

**Finest Paints and Colors,**
**Varnishes, Japans and Chemicals,**
MANUFACTURED BY
**HAMPDEN PAINT & CHEMICAL CO.**
178 Front St., New York, and Springfield, Mass.

---

BUY THE BEST

## C. A. WOOLSEY'S

# Standard Mixed Paints.

**THESE PAINTS ARE MADE WITH**

**PURE LINSEED OIL.**

DEALERS AND PAINTERS are all of one opinion that WOOLSEY'S MIXED PAINTS are the best in the market. Why are they the best?

Because they are honestly made; containing NO BENZINE, WATER or CHEMICALS, and weighing from 16 to 17 lbs. to the gallon, and owing to their great body they will bear reducing with from 1 to 2 quarts of oil to the gallon on all priming or first coat work.

Our Mixed Paints after a thorough trial of fifteen years have proven to be well adapted to all the varied climates of our coast. The salt air is considered by all to be the most destructive agency for paints to withstand, and we can with confidence guarantee our paints to be durable, as they have successfully made a reputation where many so-called pure linseed oil paints have failed.

The price of our paints have been so reduced as to conform to the low price of lead and oil, thereby increasing their popularity.

Agency for these goods are given to responsible parties and they are protected in the sale of the same in their territory. Correspondence is solicited, when prices, terms, &c., will be given. The manner in which our colors are displayed in oursample pad of colors all help the sale of these goods. OUR GUARANTEE as to general merits and worth also tends to convince the purchaser that he is fully protected in using these paints and the dealers are put in position to guarantee the same. Yours respectfully,

C. A. WOOLSEY, Prop
JERSEY CITY WHITE LEAD AND COLOR WORKS,
P. O. Box 295. JERSEY CITY, N.

---

# THE WALKER GUM CO.

**WALKER'S well known**

FOUNDED 1845 — THE WALKER GUM COMPANY — UNITAS — LONDON & NEW YORK

**VOWEL BRANDS OF KAURI AND OTHER**

## VARNISH GUMS,

**GILBERT POTTER & CO.**
SOLE AGENTS,
**164 Front St., NEW YORK.**

---

**All Paris White Sold or Delivered is the Production of my own Factory.**

**WESTMINSTER**

**ENGLISH** — T. WEDDLE & CO. TRADE MARK NEW-YORK. — **CLIFFSTONE.**

**PARIS WHITE.**

## "WESTMINSTER" PARIS WHITE

The Standard Brand, always of uniform quality.

## Whiting, Gilders' Whiting

**AMERICAN PARIS WHITE, LUMP CHALK.**

Also, Kiln Dried and Bolted Whiting, superior to any other manufactured for the use of Rubber and Oilcloth Manufacturers.

**H. F. TAINTOR,**
(Successor to Thos. Weddle & Co,)
281 PEARL STREET, NEW YORK

---

# W. H. MAGOFFIN

**319 Walnut St.,**
**PHILADELPHIA.**

Sole Manufacturer of

# KALON OIL

which has met all requirements under the most critical tests; in durability it finds no rival.

**SAMPLES MAILED UPON APPLICATION.**
Correspondence Solicited.

---

Schumachersche
No. 3. II.
Fabrik
Composition Pumice Stone.
This COMPOSITION PUMICE STONE for convenience, economy and effect is very superior to the volcanic or natural stone for every art or manufacture in which the latter is used, not only because it is entirely free from all foreign substances, which injure and interrupt the work (causing both trouble and expense), but also that it is furnished in a very tractable shape and in every texture of grain, and of hardness required for the various kinds of work.
M. SIEBOLD, Sole Agent,
44 VESEY ST., NEW YORK.

---

# Pfeiffer & Lavanburg,

MANUFACTURERS OF STRICTLY PURE

# PARIS GREEN,

Chrome Greens, and Yellows, Blues, Carmine, Lakes, Etc.
DRY AND PULP COLORS, QUICKSILVER VERMILION,
**"ORIOLE" VERMILION,** (The Best Substitute for English Made.)
FACTORY: Atlantic Color Works, Brooklyn. OFFICE AND STORE 165 William St. New York.

---

# Manganese,

**ASPHALTUM,**
**VARNISH GUMS. &C.**

**JOHN S. LAMSON & BRO., 77 Maiden Lane. New York**

out opposition. If the Pittsburg factories started up it would only make it so much worse for the members of the association. There is no trouble between the manufacturers in this part of the country.

Thomas D. Catlin, of Ottawa, Ill., was president of the meeting. He said in regard to the trade: "At this season of the year there is not much doing, but things will brace up in the fall. We do not expect a large demand, as there has not been so much building done in the West this summer as there was last year and the season before. We do not have to compete much with the Eastern people as the freight rates are against them. Another reason why the factories should not start up early is that there has been a number of new houses built in the natural gas districts. I am afraid the demand will not meet the supply. No; prices will not be changed."

During the summer shut-down a number of manufacturers have increased the capacity of their plants.

## RECENT PATENTS.

388,406. SULPHURIC ACID DISTRIBUTER. Issued Aug. 28, 1888.

Claim.—1. The combination of a supply tube, outlet pipes from said supply tube, and having a reduced opening, and overflow pipes connected with the supply tube and having a different sized opening from the opening in said outlet pipes, substantially as described.

2. The combination of a supply tube having an overflow reservoir or basin, outlet tubes connected with the supply tube, and overflow tubes connected with the reservoir, substantially as described.

3. The combination of a standard, a supply pipe having a bearing in the standard, acid throwing arms in said supply pipe, and a shield interposed between the arms and the step, substantially as described.

388,475. APPARATUS FOR THE MANUFACTURE OF LAMPBLACK. Issued Aug. 28, 1888.

Claim.—1. The combination, in a multiburner lamp, of a central supporting standard with adjustable collars thereon, an external ring with the burner tubes supported on said ring, and braces extending from said collars to the same, substantially as described.

2. A central vertical standard provided with adjustable clamping collars and connecting rods, a mutiburner lamp supported thereon, and a collection plate having adjustable bearing on said vertical standard, substantially as described.

3. The combination, with a central vertical standard, of a multiburner lamp supported thereby, an adjustable collar having a gas chamber surrounding the standard, said collar provided with packing boxes at each end, and the standard having apertures to permit gas escape into the collar, and connecting pipes leading from the collar to the burners, substantially as described.

4. A revolving multiburner lamp provided with an external ring of angle-iron braced to a central standard, with burner tubes supported thereby, substantially as described, and an endless driving chain resting in the angle of said external ring and encircling the same and the pulley of a suitable motor.

5. The multiburner lamp composed of parallel tubes, external ring, supporting bars extending across the ring from side to side under the tubes, an adjustable support under the center of said bars and a suitable gas supply device, all arranged and combined substantially as set forth.

6. In a multiburner lamp, the combination of a supporting standard, provided with clamping collars and stay rods, with a revolving hopper, a revolving scraper and an air blast, substantially as described.

7. The combination, with a collection plate, of rotating scrapers to operate thereon, an inclined hopper beneath the scrapers and rotating with them, and a circular stationary deposit chamber, with which said hopper communicates with a chute, substantially as described.

388,529. PROCESS OF OBTAINING CREOSOTE. Issued Aug. 28, 1888.

Claim.—The process herein described, which consists in mingling caustic-soda solution, containing creosote or analogous phenoloid bodies with pyroligneous acid, thereby occasioning a reaction between the mingled bodies, and depositing creosote, and forming acetate of soda by the union of the soda solution and the acetic acid of the pyroligneous-acid solution, substantially as described.


TELEPHONE No. 2031

SOLE PROPRIETORS and ONLY MANUFACTURERS OF

# GLIDDEN'S SHELLAC
## OIL FINISH,

This article of acknowledged superior merit, is now in use all over the world.

Varnishes, Japans,
Shellacs, Stains, Lacquers,
Hard Oil Finish,
Permanent Wood Finishes,
Liquid Fillers,
Coach & Railway Varnishes,
Of Finest Quality.

**SPECIALTIES:**
Color Grinders' Japans,
Black Diamond Baking Japans,
White Electric Dryer.
Baking Varnishes,
Special Varnishes & Dryers
For Manufacturers of
Linseed Oil & Mixed Paints.

## The Glidden & Joy Varnish Co.
Chicago, Ill. Cleveland, O. Kansas City, Mo.

R. J. BAKER. R. J. HOLLINGSWORTH.
**R. J. BAKER & CO.**
**Excelsior and Artisan Flint Paper**
GLUE, EMERY, &c.
FACTORY: NORTH FULTON AVE.,
Baltimore, Md,
Not in the combination.

## Edward Hill's Son & Co.,
25 & 27 Cedar St., N. Y.,
## Varnish Gums and Shellac.
Kauri Zanzibar Manilla Damar North Coast Sierre Leone
Benguela, Asphaltum, Sandrac.

## AM. BRONZE POWDER M'F'G CO.
Manufacturers of Superior Grades of
**BRONZE POWDERS & BROCADES,**
And their unexcelled and justly celebrated
**LINING BRONZES, AND ALUMIUM SILVER BRONZE,**
To which the attention of the Wholesale Trade is respectfully directed.
Factory at Verona, Essex Co., N. J.
Office and Salesroom, 6 MURRAY ST., NEW YORK.
WADSWORTH HOWLAND & CO. OUR BOSTON AGENTS.

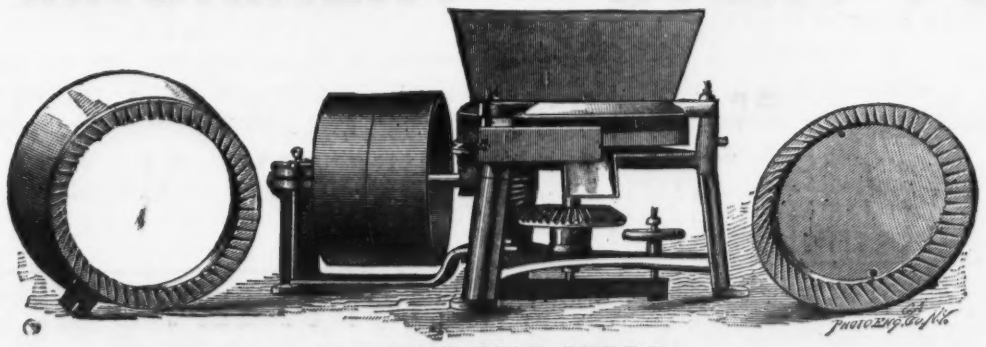
**Louis Hoffmann,**
IMPORTER OF
Artist and Paint Brushes,
HAIR PENCILS, ETC., ETC.
N. W. Cor. Lombard and Hanover Streets,
BALTIMORE, MD.
General Agent for Graining Transfer Paper.

ESTABLISHED 1866.
**JNO. H. RILEY,**
GOLD AND SILVER LEAF MFR.
ALUMINUM LEAF
**Bronze Powders,**
GOLD LEAF ANY SIZE AND COLOR MADE TO ORDER.
138 W. Fayette St., Baltimore, Md

B. PRWM. ICE, PRES'T. H. W. BENNETT, TREAS. J. S. BULL, SEC'Y
**THE WM. B. PRICE MFG. CO.,** Manufacturers of
**PAINTS in all forms.**
MRABLEINE SUPERIOR TO KALSOMINE.
Proprietors of PICRE PAINT AND COLOR WORKS,
BALTIMORE, MD.

## GEORGE A. YOUNG.
Manufacturer of
# PAINT MACHINERY FOR EVERY PURPOSE
124 John Street. BROOKLYN, N. Y.

Entire Plants Complete.



ALL GOODS SOLD ON THEIR MERITS AND GUARANTEED.

WHITE METAL MILLS.

The above cut represents an 18 inch Mill. These Mills are superior to any Metal Mill for Grinding in Oil, Japan, Water or varnish, and are manufactured with or without Water Jackets. These Mills are so constructed that the grinding surfaces are always "true," and, from their scientific construction, they obviate all danger from nails or any foreign material getting between the grinding surfaces, and much easier to dress than other styles of Mills; are strongly and compactly built and guaranteed to grind fine, and a larger quantity per day than any Mill of similar size.

SPECIALTIES:
Whiting Bolting Mills, Granite Stone Roller Mills, French Burr Stone Mills, Esopus Stone Mills,
Paris White and Whiting Chasers White Metal Paint Mills, White Metal Water Jacket Mills, 6 White Metal Mills on Bench,
Pony Mixers Dry Color Shading Mills, Drag Mills and Steam Chasers, Dry Kalsomine Mills.

ESTABLISHED 1832 TRADE VALENTINE'S MARK 1882 INCORPORATED

Valentine & Company NEW YORK

MANUFACTURERS OF

· CHICAGO · · BOSTON · · PARIS ·

VARNISHES & COLORS

COACH & CAR

# Long Island Paint & Color Works.

GEO. H. HOPPER,

MANUFACTURER OF

# PETROLEUM BARREL PAINTS.

OF ALL COLORS.

JAS. G. NEWCOMB, Manager. Office: 26 Broadway, New York.

# Acme White Lead and Color Works

DRY COLOR MAKERS AND PAINT MANUFACTURERS,

DETROIT, · · · · · MICHIGAN.

| | | |
|---|---|---|
| Chinese Blue. | Chrome Yellows. | Vermilion. |
| Prussian Blue. | Chrome Greens. | Lakes. |
| Soluble Blue. | Paris Green. | Wine Colors. |

Equal in Every Respect to the Finest Imported French Pigments.

Quality Absolutely Unsurpassed.

CORRESPONDENCE SOLICITED. SAMPLES ON APPLICATION.

CHAS. M. JUNE, General Eastern Agent, 359 Pearl Street, NEW YORK.

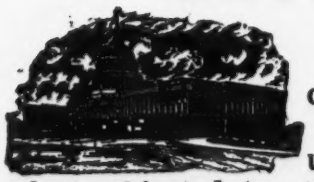
THE

# GOVERNMENT WATERPROOF PAINT CO.

MANUFACTURERS OF

GOVERNMENT WATERPROOF PAINTS,

BELT DRESSING AND CEMENT.



This Paint retains a beautiful gloss without a particle of Varnish in it, and will stay on Spruce where all other known paints fail to stay but a short time.

It contains a pigment which renders it thoroughly WATERPROOF and unlike all other known paints possesses in a remarkable degree immunity from harm when subjected to attack from ammonial vapors. Our Belt Dressing and Cement are unequalled.

Office, 167 Milk Street, BOSTON, MASS.

Factory at MALDEN, MASS.

CORRESPONDENCE SOLICITED.

WOOD ALCOHOL, ACETONE, ACETATE OF LIME, BLACK LIQUOR.

MANUFACTURED BY

WOOD EXTRACT COMPANY,

WORKS AT { North East, Cecil Co., Md. / Luther Lake Co., Mich.

OFFICES: { Detroit, Mich., 52 Moffat Block. / New York, 150 Broadway, Room 64.

AGENTS—New York Shellac Co., 229 Pearl St., N. Y.

O. S. JANNEY & Co. { 10 Letitia St., Philadelphia. / 29 Pearl St., Boston.

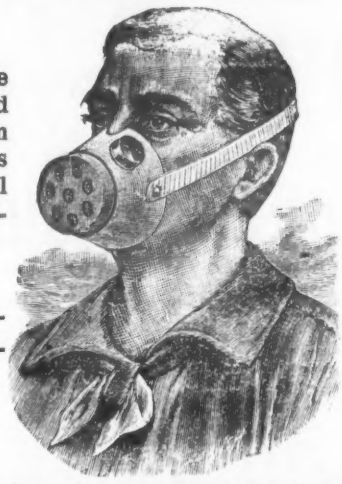
D. C. LANDIS (for Alcohol only), 17 N. Front St., Phila.

VARNISH MAKERS.

PRATT & LAMBERT

PRATT'S LIQUID DRYER. 47 JOHN ST. NEW YORK

# The Hurd Patent Automatic Respirator



To protect the **THROAT** and **LUNGS** from dust, poisonous gases and all other impurities.

Preventing disease and prolonging life.

Adapted for use in White Lead Works, Glass & Blast Furnaces, Chemical, Paint & Color Works, Snuff Factories, Smelting & Refining Works, Paper Mills, Furniture Factories, Iron Works, etc., etc.

Air is inhaled through a wet sponge and exhaled through an automatic valve

Price $2.00. MANUFACTURED BY

**MORLEY RESPIRATOR CO.,**

EAST SAGINAW, MICH.

# Currey Manufacturing Co.,

MANUFACTURERS OF

COLORS IN OIL, COACH AND CAR COLORS,

**MIXED HOUSE PAINTS,**

# Metallic Mineral Paints

FOR TANKS, FREIGHT CARS, ROOFS, BRIDGES, Etc.

211 & 213 South Clinton St.,

**CHICAGO, ILL.**

# BURGESS & NEWTON

NEW HAVEN, CONN.,

MANUFACTURERS OF

**FIRST QUALITY**

# Pure Sulphate Barytes.

Would call the attention of Buyers to the

**SUPERIOR QUALITY OF OUR MANUFACTURE.**

# Pure Carbonate Ammonia,

**LUMP,**

Single bbls., from 250 to 350 lbs., - - - 8¼ cents per lb.
Granulated, 1 cent per lb. extra.
Powdered, 1 cent per lb. extra.

Owing to the increased demand for Powdered Carbonate, we have decided to reduce its price from 2 cents to 1 cent per pound additional; at the same time calling our customers attention to the advantages and economy in its use over lump.

Our Carbonate is packed in good, tight barrels, sized and lined with cloth, and we guarantee it equal to any in the market.

**MICHIGAN CARBON WORKS,**

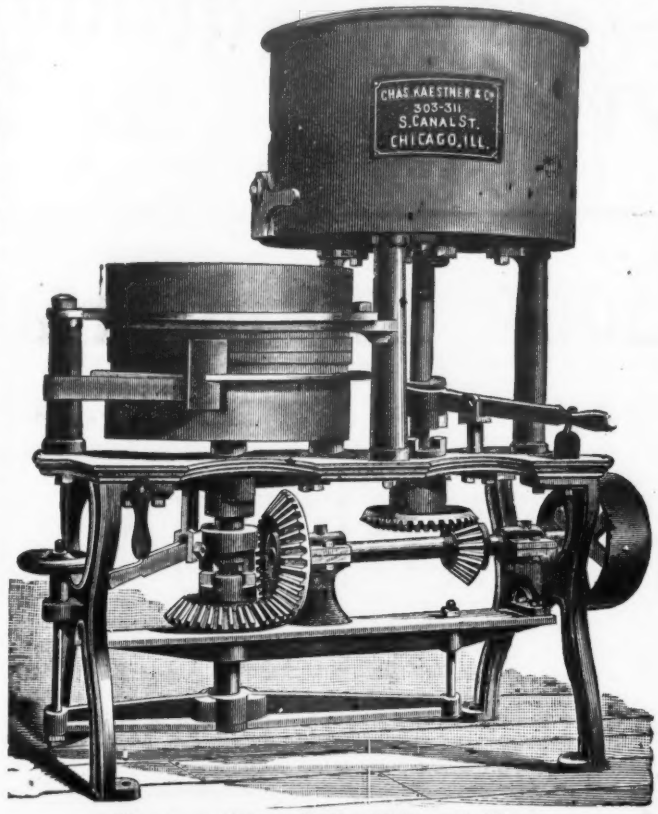
**Detroit, Michigan.**

# CHAS. KAESTNER & CO.,

BUILDERS OF

# Paint Mills, Putty Mills,

WRITE FOR THEIR CIRCULARS AND PRICES BEFORE PURCHASING.




SHAFTING, PULLEYS, HANGERS AND GEARING.

Western Water Color Mill and Mixer.

Chasers, Mixers and all Machinery used in Paint Manufacturing.

OFFICE AND WORKS:

303 to 311 S. CANAL ST., CHICAGO, ILL., U. S. A.

# "H. P." RESTORATIVE OIL.

For use on *exterior painted surfaces* of any kind which have faded or lost their brilliancy of color. A single coat of this Oil applied to a surface will make it look as well and frequently better than a coat of the best paint, while the cost is only about *one half* as much. One of the most serious difficulties experienced at the present time is that paint cracks and scales off; this is frequently owing to the fact that too much Pigment and too little oil has been applied to the surface. By using this Oil *the difficulty can be largely overcome.*

MANUFACTURED ONLY BY THE

# U. S. GUTTA PERCHA PAINT CO.,

J. WILLIAM RICE, Pres't. and Gen'l. Manager.

PROVIDENCE, R. I.

Price and discount to dealers upon application. Put up in cases containing two 5-gallon cans, or twelve 1-gallon cans.

**HENRY WOOD'S SON & CO.,**

SOLE MANUFACTURERS OF THE CELEBRATED

# MARSEILLES GREEN.

Boston, Mass.

Look for Advertisement in our Next Number.

# Brandram Bros & Co

**5 PHILPOT LANE, LONDON, ENGLAND.**

*MANUFACTURERS OF THE CELEBRATED BRAND*

BRANDRAM'S B.B PURE WHITE LEAD

OUTSIDE BRAND.

# BB WHITE LEAD.

Noted for its Extreme Whiteness of Color, Purity and Great Covering property rendering it specially suitable for Painting in Enamel White and other Decorative Work. To be had of all the Principal Importers in the United States and Canada.

BRANDRAM BROTHERS & Co PURE B.B. WHITE LEAD LONDON

INSIDE BRAND.

## The S. P. Wetherill Co., Limited

MANUFACTURERS OF

Indian, Tuscan and Venetian Reds,
American and Foreign Umbers, Siennas and Ochres,
Purple Browns and Metallic Oxides,
Barytes, Paris White, Whiting, Talc and Soapstone.

*SOLE AGENTS FOR THE SALE OF LEHIGH OXIDE OF ZINC.*

112 John Sreet, New York. 47 N. Front St., Philadelphia.

---

MARYLAND WHITE LEAD CO. WARRANTED PURE WHITE LEAD BALTO. TRADE MARK

## MARYLAND White Lead Co.,

BALTIMORE, MD.,

CORRODERS AND MANUFACTURERS OF

Dry White Lead and White Lead in Oil

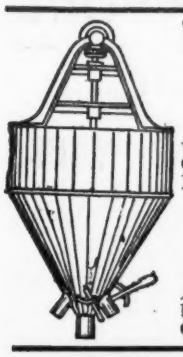
We guarantee all our manufactures to be perfectly pure.

JOHN CURLETT, President.

CHAS. KETTLEWELL, Secretary.

Office—25 South Holiday Street.

---



## The Mumford and Moodie Separator

FOR GROUND PRODUCTS.

Dispenses with Sieves and Screens.

No wear and tear—Separates to any degree of fineness, working successfully on Alkali, Basic Steel Slag, Charcoal, Chrome Ore, Cement, Flint, Ginger, Gold Quartz, Linseed, Manganese, Paints, Phosphate Rock, etc., etc.

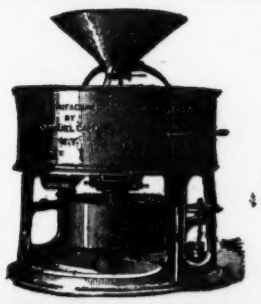
Capacity, 1 to 4 tons per hour.

—MANUFACTURED BY—

GEORGE M. NEWHALL & BRO., PHILADELPHIA, PA.

Also makers of Newhall Patent Driers adapted for all stubborn and delicate substances, Ochre, Paris Green, Sugar, Cream Tartar, Corn Meal, etc., etc. Correspondence solicited.

---



## AUTOMATIC PORTABLE MILLS

For Grinding Mineral Paints, Drop Black, &c., finer than it can be bolted.

WATER COOLED PAINT MILLS

For Colors, Printers' Ink, &c.

CHASER MILLS, BORAX MILLS,

Heavy Edge Burr Stones

The only way to Grind Phosphate Rock Cheaply.

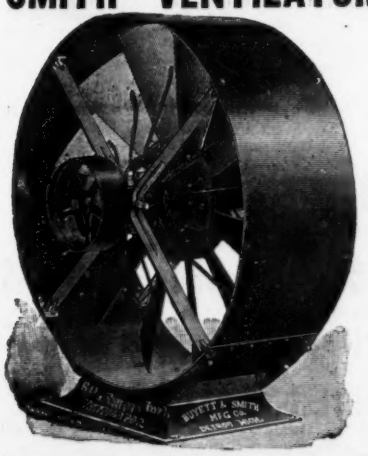
Grinding and Bolting Machines of all kinds.

SAMUEL CAREY,

17 Broadway, New York

---

## SMITH VENTILATOR AND DRYING FAN.



We pay especial attention to the fitting up of

Chemical and Pharmaceutical Laboratories,

Paint and Clue Factories and White Lead Works,

with Ventilating and Drying Apparatus. Removing Dust, Steam, or Foul Air from work rooms most effectually.

We can Increase the Capacity of Drying Rooms at a Reduced Temperature.

Correspondence and inquiries solicited. Information freely furnished. Send for Circular.

HUYETT & SMITH MFG. CO.,

Sole Manufacturers and Patentees.

No. 1,300 Russell St.,

DETROIT, MICH.

---

## New York City White Lead Works,

DAVIDSON & KNOWLES CO., Proprietors.

Manufacturers of

WHITE LEAD,
TINTED LEADS,
MIXED PAINTS,
COLORS IN OIL, &c.

The Original DOLSON WHITE LEAD a Specialty.

51 BARCLAY ST., NEW YORK.

---

## JOHN L. GROGAN,

PATENTEE AND MANUFACTURER OF

Lava Iron and Hard Wood Fillers,

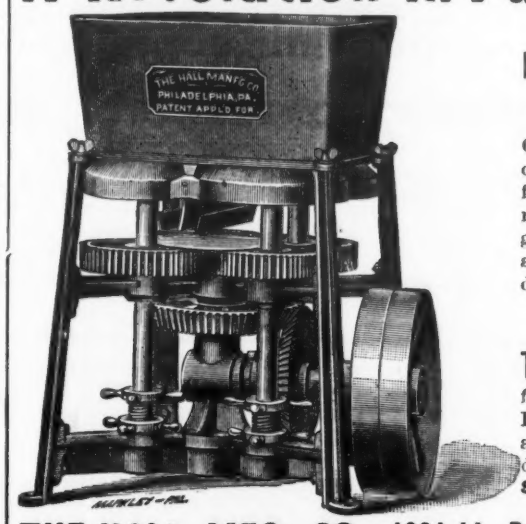
LAVA FIRE and WATER-PROOF PAINT,

Iron Priming and Finishing Paint, Damp Wall Paint, Enamel Paint, Carriage and Car Filling Preparation, Lava Brush Velvet Filler, Lava Steamship Cement

2026 Frankford Avenue, PHILADELPHIA, PA.

---

## A Revolution in Paint Mills




THE

Hall Quadruple Paint Mill

Occupies only 24 x 24 inches of floor space and has four distinct sets of runners on one stand. Will grind four times as much as an ordinary mill and do it better.

Send for Circular.

The Hall Emery Grinder

for recutting and dressing Iron Paint Mills—Quick and perfect work can be done by a boy upon it.

Satisfaction Guaranteed.

THE HALL MFG. CO. 1201-11 Buttonwood St., Phila.

---

## JAMES BRAND,

7 BURLING SLIP, NEW YORK.

IMPORTER OF THE FINER GRADES OF

English China Clay.

Correspondence Solicited.

---

## CHATTANOOGA PAINT CO

Chattanooga, Tenn.

MANUFACTURERS OF

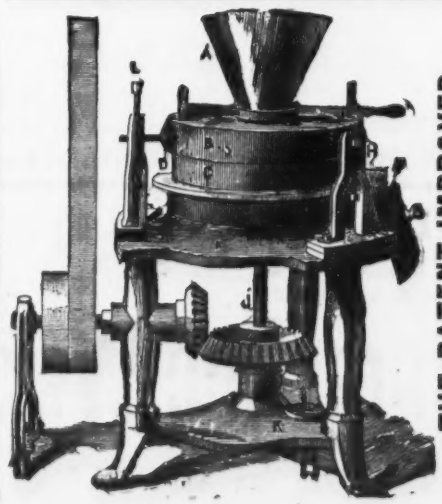
A Superior Grade of Red Oxide of Iron Paint.

Over 15,000 Tons Sold since 1880.

Best in the Market for Tin, Iron or Shingle Roofs,
Railroad Cars, Iron Bridges,
Mortar Coloring, Stove Putty,
Barns, Fences,
Outbuildings or any place where protection from the weather is desired.

Prices, Freight Rates and Samples Sent on Application.

---



THE PATENT IMPROVED

Paint and Color Mills,

THOMPSON & CAMPBELL,

Successors to KREIDER, CAMPBELL & Co.

1030 Germantown Ave., Philadelphia.

MANUFACTURERS OF

ALL KINDS OF PAINT MACHINERY.

*Contracts taken for new work, entire or in part.*

# BORNE, SCRYMSER & CO.,

REFINERS OF

## Cylinder Oils, Dark and Filtered,

**BLOOMLESS FILTERED NEUTRAL OILS,**

**SPERM BURNING OIL, 300° FIRE TEST,**

**WOOL STOCKS AND MINERAL LUBRICATING OILS GENERALLY.**

Works: Elizabethport, N. J. 80 & 81 SOUTH ST., NEW YORK

---

**Meriam & Morgan Paraffine Co.**

CLEVELAND, O.
Manufacturers of
COLD PRESSED PARAFFINE OILS,
REFINED PARAFFINE WAX,
PARAFFINE WAX CANDLES,
PARAGON AXLE GREASE.
"PARAGON SPINDLE" OIL,
OILS for GENERAL MACHINERY,
"CURRIERS' FINISHING" OIL.
Chicago Office, 110 Lake St.

Branch Office 32 Oliver St., BOSTON, MASS.
Direct Receivers, Importers and Dealers in
PURE COD OIL
Newfoundland & Domestic,
WHALE, SPERM, FISH, BANK, STRAITS & MENHADEN OILS,
MEDICINAL COD LIVER OIL
Prices and Samples Furnished.

PARAGON AXLE GREASE

---

**George Delano's Sons.**

SPERM, SEA-ELEPHANT, WHALE AND MENHADEN OILS,
Refined Spermaceti, Sperm and Paraffine Candles.
WHALE AND FISH PRESSINGS,
SPERM, WHALE AND FISH OIL SOAPS.
Factory, New Bedford, Mass. 140 FRONT STREET, N. Y.

---

**Josiah Macy's Sons,**

GENERAL COMMISSION MERCHANTS,
191 FRONT STREET, NEW YORK
Manufacturers of the Celebrated Brand
**"Macy's Prime" Lard Oil.**

SPERM, LARD, WHALE, COTTONSEED, ELAIN AND RED OIL,
"CLEMENTS" CORN STARCH, IN BOXES AND BARRELS, for Export and Manufacturers use. AGENTS FOR L. Z. O. OXIDE OF ZINC.
WESTERN AND SOUTHERN PRODUCE SOLD ON COMMISSION.

---

J. N. KNOWLES, Manager. EDWIN L. GRIFFITH, Secretary.

**ARCTIC OIL WORKS**

MANUFACTURERS OF
**Sperm Whale, Elephant & Fish Oils**
Spermaceti, Sperm Candles,
WHALE AND FISH PRESSINGS,
SPERM, WHALE AND FISH OIL SOAPS
OFFICE, 28 CALIFORNIA STREET,
San Francisco, California.
C. L. GRIFFITH & CO., 82 Front St., New York, Eastern Agents.

---

**C. M. MIX,**

CLEVELAND, OHIO, U. S. A.
Manufacturer and Refiner.
**Refined Paraffine Wax**
A SPECIALTY.
Office and Works Cor. Giddings Ave., and C. & P. R. R.
CORRESPONDENCE SOLICITED

---

**N. K. Fairbank & Co.,**

OFFICES AND FACTORIES AT
CHICAGO - ST. LOUIS - OMAHA - NEW YORK.
PRINCIPAL OFFICE AT CHICAGO.
Address, New York Office at 218 Produce Exchange.
We call especial attention of the Drug Trade to our
"FAIRY SOAP."

The "Fairy" brand is the Purest Soap ever manufactured. We warrant it far superior to any imported Castile Soap. Send us a trial order.

---

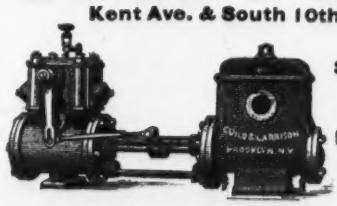
**Lard Refiners, Oil Pressers, Soap Makers.**

MANUFACTURERS OF
**Extra Double Refined Acidless Lard and Tallow Oils**
AS WELL AS ALL GRADES OF
**Lard Oils, Tallow Oils, Neatsfoot Oils.**
—REFINERS OF—
**ACIDLESS CYLINDER TALLOW.**
Our Acidless Products are warranted not to contain above one-quarter of one per cent. of Free or Fatty Acid.
N. K. FAIRBANK & CO.
N. B.—The best brands of Butchers' and Packers' Tallow contain from one to ten per cent. fatty acid.

---

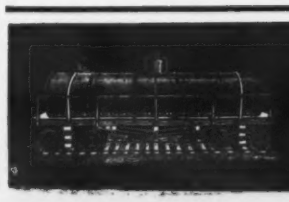
**GUILD & GARRISON,**

Kent Ave. & South 10th St., Brooklyn, N. Y.
Builders of




STEAM PUMPS,
VACUUM PUMPS,
VACUUM APPARATUS,
FILTER PRESS PUMPS,
AIR COMPRESSORS,
PISTON BLOWERS, ETC.

---



WM. B. POLLOCK & CO.
MANUFACTURERS OF
OIL TANK CARS, OIL TANKS
AND
STEAM BOILERS.
YOUNGSTOWN, OHIO

## OIL MARKET.

**Note**—*Our prices are for large lots except when otherwise specified, and buyers of small quantities must expect to pay an advance on these figures.*

*The prices current will be found on page 49.*

### Vegetable Oils.

TUESDAY EVENING, Sept. 4, 1888.

The linseed oil market seems to have fully recovered from the attack made on values a few weeks since, and is steady at last quotations of 53c for city oil and 50c for western oil on spot. There is no pressure to sell out of town brands. A fair movement is reported.

The cotton oil market has ruled rather quiet and the broken week interfered with general trade somewhat, but prices are firm all around for spot supplies, crude being held at 42c and prime summer yellow at 48½@49c with white summer quoted at 49@50c. Oil is offered sparingly which indicates a limited stock, and as it has to meet wants until the latter part of October or first part of November, it is questionable if there will be sufficient to go around. As a consequence higher prices are expected for immediate delivery. Inquiries for future months are mostly confined to crude, but the lowest figure yet named is 35½c. Very little business has been done, however, the total sales for forward delivery since the first offerings were made, being 500 bbls. There is a desire to await further developments before making contracts. This being the first week of the new season, active operations are being made in the primary markets for what promises to be the most successful season ever experienced by the cotton oil industry. A largely increased consumption, particularly in the lard trade, is expected, and the production will no doubt be ample to meet all necessities. A review of the work during the season will be found in our editorial columns. The following statistics relative to the New Orleans market have been sent to the REPORTER by Mr. J. H. Duggan:

Prices ruled as follows: 1887-8—Cottonseed, $9@12 per ton; oil cake, $18 25@23 per ton for export; meal $17 75@22 per ton for export; crude oil, 26@36¼c per gallon; refined oil, 36@38c per gallon.

1886-7—Cotton seed, $8@9 per ton; oil cake, $18@20 per ton for export; meal, $16 50@19 75 per ton for export; crude oil, 26@31c per gallon; refined oil, 33@38c per gallon.

1885-6—Cotton seed, $7@16 per ton; oil cake, $18@23 25 per ton for export; meal, $18 50@24 per ton for export; crude oil, 21@30c per gallon; refined oil, 28@36c per gallon.

The following table of exports and imports shows the movement for the past three seasons:

| | 1887-8 | 1886-7 | 1885-6 |
|---|---|---|---|
| Receipts by river and rail— | | | |
| Oil, bbls | 98,743 | 88,997 | 73,900 |
| Cake, sacks | 268,758 | 283,436 | 161,813 |
| Meal, bags | 468,871 | 276,210 | 514,843 |
| Soap stock, bbls | 2,350 | 2,300 | 2,409 |
| Cotton seed sacks | 2,210,255 | 1,475,840 | 2,130,265 |
| Foreign exports— | | | |
| Oil, bbls | 42,308 | 37,962 | 91,222 |
| Cake, sacks | 356,407 | 487,268 | 445,010 |
| Meal, bags | 672,545 | 250,220 | 554,225 |
| Soap stock, bbls | 5,003 | 12,144 | 13,507 |
| Coastwise exports— | | | |
| Oil, bbls | 42,417 | 45,005 | 48,976 |
| Cake, sacks | 101,592 | 44,815 | 19,045 |
| Meal, bags | 167,494 | 291,137 | 90,886 |
| Soap stock, bbls | 2,707 | 4,043 | 4,808 |

NOTE.—The above foreign exports for 1886-7 include about 12,000 barrels oil comprised in the coastwise exports, subsequently ascertained to have been reshipped from New York for foreign account. The coastwise and foreign exports comprise nearly all the local mill production, as well as the receipts at this port.

Exports of cottonseed oil from New York by countries

| To | For week ending Sept. 3, 1888. Bbls. | Since Sept. 1, 1887. Bbls. | Same time last year Bbls. |
|---|---|---|---|
| Africa | .. | 4 | .... |
| Arg. Republic | .. | 6 | 11 |
| Australia | .. | 213 | 152 |
| Austria | .. | 2,978 | 2,200 |
| Belgium | 100 | 4,009 | 1,065 |
| Brazil | .. | 215 | 279 |
| Br West Indies | 11 | 1,028 | 1,387 |
| Br Guiana | .. | 2 | 30 |
| Canary Islands | .. | .... | .... |
| Central America | .. | 12 | 17 |
| Chili | .. | 19 | 192 |
| China | .. | .... | .... |
| Cuba | .. | 2 | 41 |
| Dan West Indies | .. | 161 | 181 |
| Denmark | .. | 51 | 4 |
| Dutch West Indies | .. | 7 | 7 |
| Ecuador | .. | 1 | 10 |
| Egypt | .. | .... | .... |
| England | .. | 2,682 | 3,441 |
| France | .. | 14,430 | 4,612 |
| ench West Indies | .. | 14 | 1,063 |
| ermany | .. | 1,528 | 948 |
| Hayti | .. | 66 | 51 |
| Italy | .. | 1,020 | 550 |
| Japan | .. | 20 | .... |
| Mexico | .. | 151 | 16 |
| Netherlands | 50 | 17,098 | 23,802 |
| North America | .. | 495 | 213 |
| Norway | .. | 450 | .... |
| Peru | .. | 13 | .... |
| Pto Rico | .. | 51 | 1 |
| Scotland | .. | 170 | 160 |
| Spain | .. | 110 | .... |
| Turkey | .. | .... | .... |
| U. S. Columbia | .. | 67 | 38 |
| Uruguay | .. | 25 | |
| Venezuela | .. | 40 | 30 |
| Total | 161 | 55,000 | 39,871 |

Exports of cottonseed oil from New Orleans by countries:

| To | For week ending Aug. 31, 1888. Bbls. | Since Sept. 1, 1887. Bbls. | Same time last year. Bbls. |
|---|---|---|---|
| Austria | .. | .... | 2,000 |
| Belgium | .. | 4,200 | 2,000 |
| England | .. | 500 | 4,622 |
| Franco | .. | 1,920 | 3,375 |
| Germany | .. | 1,658 | 760 |
| Gibraltar | .. | .... | 9,064 |
| Italy | .. | 2,768 | 3,400 |
| Netherlands | .. | 17,628 | 2,843 |
| Portugal | .. | .... | .... |
| Spain | .. | 2,500 | 2,000 |
| Total | | 31,234 | 30,114 |

Exports of soap stock from New Orleans by countries:

| To | For week ending Aug. 24, 1888. Bbls. | Since Sept. 1, 1887. Bbls. | Same time last year. Bbls. |
|---|---|---|---|
| Cuba | .. | .... | .. |
| England | .. | .... | 3,990 |
| Italy | .. | .... | 2 |
| Spain | .. | .... | .... |
| Total | .. | .... | 3,992 |

Ceylon cocoanut oil is strengthening in value and now held at 5¼c on spot or near-by arrival. A fair jobbing business is reported. Cochin oil is quiet at 6¼@6¼c, according to quantity, but has a limited outlet.

Olive oil has had little chance to make a change, owing to the week being broken by one and a half holidays. The tendency is upward, although no alteration has been made in prices. The advices so far received of the progress of the crop of 1888-89 in Crete are very favorable, the weather having been propitious, and hopes are entertained of a yield doubling the last, or say about 30,000 tons. At present, stocks being reduced, no business is passing for export to Northern Europe, either from Crete or Asia Minor. In Mytelene a good crop is anticipated, and a fair average crop in Adramyti Aivali and vicinity. From Tunis reports of the failure of the crop are now pretty fully confirmed. The prices being paid for local consumption equal about £39 f o b. There is some probability that Tunis will have to import oil from Italy. In Morocco, the grain crop having turned out well, a fair olive crop is hoped for. There is said to be a good supply of old oil still in the interior of the country, though nothing fresh has found its way to the coast. The olive crop in Spain continues to progress very satisfactorily, but until the new oil comes to market it is not likely that any business for export to northern ports can take place.

### Animal and Fish Oils.

The gradual upward tendency of lard has elevated the views of lard oil pressers, and they were disposed to demand 71@72c to-day for prime grades. They are said to be preventing an accumulation by restricting production at these prices, as consumption is necessarily curtailed. The demand has changed in a light way to extra No. 1, and the lower grades, which are relatively below prime in value.

A light business has been done in crude sperm and whale oils at New Bedford on private terms. Reports are eagerly awaited from the Pacific coast on the progress of the catch. The refined market is steadier at usual figures.

Whalebone is held higher in the expectation of a short yield this season, and holders decline to shade $3.00 per ℔ for Arctic bone. Some business has been done in Arctic and South Sea bone on private terms. The total stock is distributed as follows:

| | | | |
|---|---|---|---|
| New Bedford—Arctic, | 3,500 | | |
| " " Jap & Ochotsk, | 30,500 | 39,100 | |
| " " South Sea, | 5,100 | | |
| Elsewhere—Arctic, | 50,000 | | |
| " Jap & Ochotsk, | 6,000 | 57,400 | |
| " South Sea, | 1,400 | | |
| Total, | | | 96,500 |

Elaine oil is higher, owing to the advance in tallow, and is now held at 36½@40c, according to quantity.

Menhaden fish oil is wanted at 25c, but supplies are still limited, and the fishermen find no difficulty in disposing of their stock before being made. They seem to be averse to elevating their views above 25c, as it might result in an accumulation, and that is what they wish to avoid. No important transactions are reported, but shipments are constantly being made. Pressed grades are slightly firmer.

### Mineral Oils.

No change can be reported in the market for mineral lubricating oils. A quiet movement is progressing at usual prices. No advance is expected unless in sympathy with a permanent advance in the price of crude and refined, which is not probable at an early date.


REED, HALL & HEWLETT
18 & 20 PLATT ST., NEW YORK.

MANUFACTURERS AND SHIPPERS OF
Animal, Vegetable and Minera OILS.
Valve Cylinder, Signal, Machinery, Engine and Lubricating Oils.
Sperm, Lard, Tallow, Neatsfoot, Whale Elephant, Seal, Cod and Fish Oils.
Pure Spanish and Italian Olive Oils.
All grades of Pure Olive Oil Soap for Silk and Worsted Mills, either in bulk, bars or powdered.
Saponified Red and Elaine Oils.
Mineral Wool Oils and Wool Stocks.
Castor, Rape, Mustard and Cottonseed Oils
Paraffine Oils, Paraffine Wax and Beeswax.
All kinds of Lubricating and Axle Greas
Tallow, Lard and Cottonseed Grease for Soap Makers.
SOLE EASTERN AGENTS
FOR THE
West Virginia Oil Company
PARKERSBURG, W. VA.
Producers of Pure Natural West Virginia Rock Oils.

Future City Oil Works.
J. J. POWERS & CO., ST. LOUIS, MO.,
Refiners and Manufacturers of CRUDE, REFINED AND BLEACHED
COTTONSEED OILS.
Pure Winter Pressed Miners' Oils, White and Yellow, the best BURNING ever prepared for Miners' use; Superior to LARD OIL and at LESS COST Guaranteed to remain limpid at Freezing Point.
OF Salad Oils,
PARAGON (TRADE MARK.) COOKING OILS
Purely Vegetable.
Cottonseed Oil, Cake and Meal Reginnings & Soap Stock
CORRESPONDENCE SOLICITED.

ELAINE OIL.
The Emery Candle Co., CINCINNATI, OHIO.
Cornwall & Bro., LOUISVILLE, KY.
CLAYTON ROCKHILL,
COMMISSION MERCHANT,
30 Platt Street, - NEW YORK.
GENERAL EASTERN AGENT.

F. W. BRODE & CO.,
MEMPHIS TENN.
COTTONSEED PRODUCTS
CRUDE AND REFINED OILS,
Miners' Oils. Winter Yellow, Summer Yellow Summer White, & Cooking Oil.
Meal and Cake. Soap Stocks.
Correspondence Solicited. Samples sent on application

MICA AXLE GREASE.
THE CINCINNATI TRANSFER CO.,
Cincinnati, Ohio.
Mica Axle Grease is very satisfactory in every respec. *Quite superior to any axle grease we have ever used before.*
W. J. Winterbottom, Supt.
*We endorse the above.*
Griffith & Hill, Lumber Dealers.
Jas. Griffith & Sons, Planing Mill.
Springfield, Vt.
I have a large sale of Mica Axle Grease. *It wears three times as long as any I ever used.*
Minor W. Newton
Eldorado, Wis.
We have sold Mica Axle Grease for five years. *It is the best Grease manufactured.*
C. H. & Buell Anderson
Detroit, Mich.
I have used Mica Axle Grease for about *eight years* with the very best satisfaction. *It doesn't run off the axle in hot weather; and it doesn't chill and harden in cold weather.* I have used almost all other makes of axle grease *and consider the Mica worth more than twice as much as any other for my use.*
J. C. Carpenter, dealer in coal and wood
Manufactured by the
STANDARD OIL COMPANY,
Cleveland, Ohio.

# Washington Butcher's Sons Company,

PHILADELPHIA, PA., U. S. A.

**Office and Salesroom, No. 1 South Front Street.**

## Refiners of Lard,

## Manufacturers of Oils.

MINERS' OILS,
WINTER AND SUMMER WHITE COTTON OILS,
WINTER AND SUMMER YELLOW COTTON OILS
COOKING OILS.

PRIME LARD OIL,
EXTRA No. 1 LARD OIL,
No. 1 LARD OIL.
No. 2 LARD OIL.

Absolute Purity Guaranteed.
Correspondence Solicited.

# American Oil Co. of New York,

**Office, 45 BROADWAY, NEW YORK.**

Refinery - - - - - - Brooklyn: L. I.

**MANUFACTURERS OF**

# COTTONSEED OIL

OFFER FOR SALE ALL GRADES OF

**Crude, Summer Yellow, Summer White, Winter White, and Winter Yellow Cottonseed Oil.**

**Soapstock.**

## Oil Cake.

There is no Western cake on spot and the unusually high ocean freights prevent business, as crushers are not inclined to accept the lower figures named by shippers. The season, however, is not sufficiently advanced to allow much stock on the market. It is said that $22 50 represents the value of Western cake on this market.

## Wax, Lard, Tallow, Etc.

Paraffine wax has a moderate sale at previous steady quotations. Crude wax is in better demand than refined, and both are in ample supply.

The lard market continues excited and moving upward. Western steam commands 9 85@ 9 90c, with city steam at 9 30c and refined 9 30@ 10 85c.

Lard stearine is higher at 11¾c asked and 11½c bid, but the movement is slow and stock is limited. Oleo stearine is steady at 10@10¼c for city. Light supplies are still a feature.

Tallow has advanced to 5¼c asked and 5⅛c bid, and the market closes sensitive.

## Naval Stores.

Spirits Turpentine—This article is much firmer in tone than at the time of our last report, and an advance in the price will also be noticed. This was brought about by the advices from the primary sources, which came stronger and higher. No particular trading can be noted, the higher rates rather shutting out buyers,except where stocks were positively needed. The holiday also interfered, to a greater or less extent, with business, and we are unable to note a single transaction of any special importance. The market at the close to-day was firm at 37@37½c.

Rosin—The trading in this article has been almost wholly of a local nature. The movement for export being very light as has also, in fact, been the home demand, and the market on the whole has been decidedly dull and uninteresting. There have been no fluctuations in prices and our ruling figures of to-day are identical with those contained in our last report. The market closed dull to-day, with the followinf rates ruling:

Strained, $1 02½; good strained, $1 07½; E, $1 15; F, $1 20; G, $1 25; H, $1 32½; I, $1 40; K, $1 50; M, $1 55; N, $1 80; W G, $2 30; W W, $2 85.

STOCK ON HAND AT

| | Spirits. | Rosin. | Tar. |
|---|---|---|---|
| New York, Sept. 1...bbls | 1,696 | 21,179 | 453 |
| Savannah, Aug. 24..... | 10,337 | 69,424 | .... |
| Wilmington, Sept. 1..... | 5,257 | 73,983 | 861 |
| Charleston, Aug, 24..... | 3,328 | 18,848 | .... |
| London, Aug. 20.....11,500 | .. . | . .. | |

LONDON TURPENTINE STATISTICS.

Messrs. Watt & Son, London, under date of Aug. 18 say:

| | 1888. | 1887. | 1886. | 1885. |
|---|---|---|---|---|
| Stock Aug. 18.. | 11,531 | 7,863 | 19,309 | 25,446 |
| Delivered this week..... | 1,144 | 1,074 | 1,319 | 920 |
| Since Jan. 1.... | 42,087 | 45,432 | 50,181 | 37,557 |
| Price Aug. 18... | 28s 3d | 25s 9d | 27s 0d | 26s 9d |
| Sept-Dec..... | 28s 3d | 25s 0d | 26s 9d | 27s 9d |
| Jan-Apl..... | 29s 3d | 25s 6d | 27s 3d | 27s 9d |

## Naval Stores Review.

The season of 1887-88 opened, says the New Orleans *Times-Democrat*, with large stocks on hand, carried over from the previous one, and with the light demand since the opening of the new season prices have declined as receipts of new stuff entered the market, until the following extreme low prices have beea reached: A, B, C, D, E, F and G, 80c; H, 85c; I, $1 10; K, $1 15; M, $1 20; N, $1 50; WG, $1 75; WW, $2 50; and at the above prices the distillers are making a loss on every barrel of rosin manufactured, which, no doubt, will force a great many distillers to barrel only their fine or pale rosins and hold their low or common grades at the still for better prices. Of course many of the distillers will be forced to ship and sell in order to secure funds to run their orchards.

Fortunately for distillers the price of turpentine has held up very well so far this season and to-day is quoted at 33½c, or 5c a gallon more than it was quoted this day last year (28½c). The receipts of turpentine so far this season have fallen short of last season, the demand is good, and consequently prices should advance, We trust and look for an advance in the price of rosins, as the stocks are no doubt lighter, and, with a good demand, we certainly expect them to reach the cost of production.

| Stock. Wilmington— | Rosin. Bbls. | Turp'ine Bbls. |
|---|---|---|
| Stock on hand July 31, 1886... | 71,891 | 2,799 |
| Stock on hand July 31, 1887... | 86,744 | 5,179 |
| Stock on hand July 31, 1888... | 60,045 | 5,959 |
| Savannah— | | |
| Stock on hand July 31, 1886... | 34,899 | 11,075 |
| Stock on hand July 31, 1887... | 56,976 | 12,244 |
| Stock on hand July 31, 1888... | 85,937 | 8,249 |

The following are the Wilmington prices at the beginning of each month for the season:

| 1887-88. | April. | May. | June. | July. | Aug. |
|---|---|---|---|---|---|
| Turpentine...36 | 32½ | 32¼ | 32¼ | 33⅜ | |
| Rosin.....80 | 82½ | 75 | 75 | 75 | |
| 1886-87. | | | | | |
| Turpentine...33 | 32 | 30 | 28½ | 28½ | |
| Rosin.....85 | 82½ | 80 | 77½ | 80 | |
| 1885-86. | | | | | |
| Turpentine...36 | 33 | 30 | 29 | 31¾ | |
| Rosin.....82½ | 80 | 77 | 75 | 75 | |

## Wool Oils.

CINCINNATI, Sept. 1.

*Editor* OIL, PAINT AND DRUG REPORTER:

In your paper there appeared lately an article on "Lubricants for Wool," in which the writer attempts to show the superiority of mineral over animal oils, especially in two particulars—"first, ease and economy of scouring, and second, freedom from the tendency to heat and cause spontaneous combustion." The animal oils referred to are olive and lard oils. These undoubtedly are open to the objections mentioned, but there is an oil which, in these two particulars, is as nearly perfect as it is possible to make one. I refer to distilled elaine.

The readiness with which elaine can be scoured from the cloth, is too well known to require discussion. It is the only oil for wool which combines immediately and perfectly with any alkali.

Elaine is not subject to spontaneous combustion. The process of distillation, which it undergoes in the course of its manufacture, removes all those impurities of the nature of ferments which predispose an oil to spontaneous combustion. Numerous experiments on the tendency to oxidation of various oils, have convinced me that in this elaine must be classed with the mineral oils, they being the only ones which are absolutely safe. Not being oxidizable, neither elaine nor mineral oils will gum.

As to viscosity, the writer of the article referred to says that a mineral oil can be made of any desired body. This is very true, and that is why scarcely ever two samples of mineral wool oil will have the same viscosity, so that a purchaser is never sure of what he gets. On the other hand, elaine never varies. It has just the fluidity and body desired in a wool oil, and we can be sure that all samples will be precisely alike. Besides this elaine will not evaporate from the wool,

If we were to sum up the properties of elaine which have any bearing on its application to oiling wool I think we would find that elaine possesses all the desirable qualities of mineral oils combined with those lubricating properties; and that readiness in scouring which gives animal oils such a hold on the woolen industry and make it so hard for mineral oils to find their way into general use.

E. TWITCHELL,
Chemist for The Emery Candle Co,


**Wm. F. Nye's Sewing Machine Oil.**

This is the Best known Oil, and is used in all countries, wherever Sewing Machines have reached.

In purchasing oil, ask for Nye's CrystalSperm. Every dealer keeps it.

NEW BEDFORD, MASS

JOS. S. MARTIN,
DEALER IN ALL KINDS OF
**OILS,**
524 Seventh St., S. E.,
WASHINGTON, D. C.

Correspondence solicited with manufacturers and first hands only for the sale of specialties in oils, etc., in Washington and Virginia.

Commission House Established in the year 1845
**F. M. BURROUGH,**
Successor to R. S. BURROUGH & CO.,
81 Dyer St., (upstairs) Providence, R.I.
OIL, COTTON, SOAP.

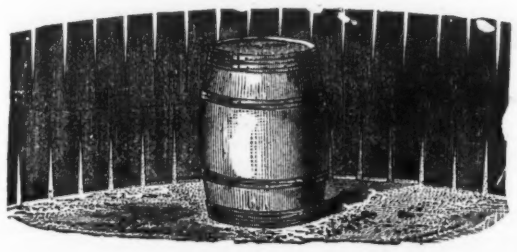
Ropes Process Double Pressed Saponified Oil; Standard Brands Lard and Soap Oils, Sperm, Olive, Cylinder, Paraffine, Machinery. Extra Staple Cotton for Mixing with Wool. Manufacturer of Soaps for worsted yarns & goods

**"Petroleum Distillation** and Modes of Testing Hydro-Carbons," by Allen Norton Leet. An exhaustive treatise concerning old and new processes of separating and refining Mineral Oils; together with directions as to the setting and construction of stills, treating houses and all the appurtenances of Oil Refineries; also facts concerning adulterations, and how to detect them. Price, $2.00.
OIL, PAINT & DRUG PUBLISHING CO.,
72 William Street New York.

HUGO MATTULLATH, *President.* CHAS. E. COTTRELL, *V. Prest. and Treasurer.* CASS G. ROBINSON *Secretary.*

ANCHOR MAN'F'G. CO.
ONE STAVE BARREL
TRADE MARK
DETROIT, MICH.

MANUFACTURERS OF



# One Stave Barrel,

KILN DRIED HEADING

—AND—

**COOPERAGE SUPPLIES.**

Works at Anchorville, Mich.

Office, 44 & 45 Buhl Block, Detroit, Mich.

ADDRESS ALL LETTERS TO DETROIT.

**COMMISSION.**

Spirits Turpentine, Naval Stores and Oils, Linseed Oil.
Rosin, **Rose, Whitehurst & Co.,** Cottonseed Oil,
Tar--Pitch, BALTIMORE, MD. Lubricating
Bright Varnish Pine Oil. Oils.

CONSIGNMENTS SOLICITED.

The Plume & Atwood Manuf'g Co.
MANUFACTURERS OF
KEROSENE BURNERS,
LAMP TRIMMING, LAMPS, LANTERNS &c.
Factories, WATERBURY, CONN.
WAREHOUSES:
18 MURRAY ST., New York. 109 LAKE ST., Chicago. 13 FEDERAL ST Boston.

**LATEST IMPROVED COTTONSEED LINTERS.**
MANUFACTURED BY
**CARVER COTTON GIN CO.,**
EAST BRIDGEWATER, MASS.

This Linter improves the Seed for all purposes, whether for Oil. Feeding Stock or Planting. Correspondence solicited.

# BUSH & DENSLOW'S
PREMIUM
# SAFETY OIL.

**BEST IN THE WORLD.**

The New York Board of Underwriters say "Bush & Denslow's Premium Safety Oil is a perfectly safe Illuminator, and its use will result in a great saving of life and property."

## BUSH & DENSLOW MFG. CO.,

**Refiner's Office, 130 Pearl Street, - NEW YORK.**

---

## CREW, LEVICK & CO.,
MANUFACTURERS OF
HIGH FLASH EXTRA VISCOSITY
## Red Machinery, Heavy Dark Cylinder & Lubricating Oils.

FOREIGN AGENTS FOR THE SALE OF
**Clark & Warren Co.'s**
FILTERED PRODUCTS.

**PARAFFINE WAX.**
AGENCIES ESTABLISHED THROUGHOUT EUROPE.

PROPRIETORS OF THE
**Seaboard Oil Works,**
Office 131 ARCH ST., PHILA

---

**J. H. DUGGAN,**
Secretary and Treasurer Cottonseed Crusher Association,
BROKER IN
**COTTONSEED PRODUCTS**
AND
**OIL MILL SUPPLIES,**
180 Common Street,
NEW ORLEANS.

---

COLUMBIAN IRON WORKS 23 TO 39 ADAMS ST. BROOKLYN, N.Y.
## OIL WORKS MACHINERY.
WILLIAM TAYLOR & SONS.
HYDROSTATIC PRESSES, AND GENERAL MACHINERY.

---

**EDWIN SCHOFIELD,**
SUCCESSOR TO
R. H. NUTT'S SON & CO.,
**OIL PRESS MAT**
AND
BAGGING MANUFACTURERS
81 Water St., Brooklyn, N. Y.

---

LEWIS B. SILLIMAN,
Manufacturer, Producer and Wholesale Dealer in
**Machinery Illuminating,**
**Lubricating and other oils.**
BRIDGEPORT, CONN.

---

## Cottonseed OILS
W. H. BOYER & CO., Philada., Pa.

---

EXCELSIOR LUBRICATING CO
J. D. BEECHER, Proprietor,
Manufacturers and Dealers in
Machinery, Engine, **OILS** Cylinder, and Car.
CHEMICALLY PURE PETROLATUM.
New Haven, - - Conn.

---

ALEX. McDONALD, President. H. A. HUTCHINS, Secretary, JAS. McDONALD, V. Pres't and Treas

## CONSOLIDATED TANK LINE CO.,
31 and 33 W. Pearl Street, CINCINNATI, O.

FINE LUBRICATING AND MACHINERY
DEALERS IN ALL GRADES OF
## OILS
Railroad, Engine Car and Coach Oils a Specialty

---

**DELAWARE LUBRICATING OIL REFINERY,**
HIRAM E. LUTZ, Proprietor.
Manufacturer of Special Brands
**Victor, Reliance and Eclipse Oils,**
LOW GRAVITY—HIGH FIRE TEST,
For Engines, Spindles, Machinery, &c., &c
**PARAFFINE OILS AND WAX.**
OFFICE, 32 N. 11th STREET, PHILADELPHIA, PA..
Refinery, Thurlow Pa. Correspondence Solicited Samples sent on application

---

TO BLEACHERS OF PARAFFINE WAX BY THE NEW PROCESS.
**Animal Charcoal**
PREPARED ESPECIALLY FOR ABOVE BY
**W. H. COWBURN,**
3 Clarence St., Albert Sq., Manchester, England.
Correspondence Invited.

---

## INGALLS & COMPANY,
(Works, Grand Trunk Junction,)
**Illuminating and Lubricating Oils,**
AGENTS FOR
Wilson & Evenden's Oil Tanks and Shipping Cans.
OFFICE, No. 46 JEFFERSON AVENUE, - - - DETROIT, MICH.

We Will Buy Good Second-Hand Carbon Oil and Naphtha Barrels

---

## D. A. STUART & COMPANY
MANUFACTURERS OF
**Oils and Lubricating Compounds.**
PARAFFINE WAX A SPECIALTY.
Office, 8 State St., Factory, 421 & 423 Illinois St., CHICAGO, ILL

---

## DAVIS OIL CO,
10 & 12 OLD SLIP, Cor. Water St., NEW YORK.
MANUFACTURERS OF
**Lard, Neatsfoot and Tallow Oils,**
ALSO MANUFACTURERS OF REFINED ANIMAL OILS.

# The American Cotton Oil Company,

OF OHIO

(SUCCESSORS TO JOHN V. LEWIS & CO.,)

**CINCINNATI, O.,**

Manufacturers of all Grades of

# COTTON OIL.

Crude Cotton Oil,
Summer Yellow Cotton Oil,
Summer White Cotton Oil,
Winter-Strained Cotton Oil,
White Cottonseed Stearine,
Yellow Cottonseed Stearine,
Cottonseed Soap Stocks.

**Winter Miners' Oil and Brewers' Lamp Oil (White and Yellow,)** Especially prepared for burning purposes and guaranteed to remain bright and limpid at 32 deg. Fahr.

**Empire Salad Oil,** A strictly Winter-Strained Oil, especially prepared for druggists' and culinary purposes, guaranteed to remain bright and Limpid at 32 deg. Fahr.

**A. C. O. Co., J. V. L. & Co and I X L Cooking Oils,** purely vegetable. Recommended to and extensively used by bakers, hotels and private families.

Owing to our close connection with the manufacturers of the crude oil and our superior facilities, we are in a position to defy competition and to furnish our products at lower prices than can be made by other refiners.

**QUOTATIONS FURNISHED UPON APPLICATION.**

# UNION OIL CO.,

**PROVIDENCE, R. I., AND NEW ORLEANS LA.**

ESTABLISHED 1855.

# COTTONSEED OILS,

**Crude, Summer White and Yellow, Winter White and Yellow.**

**DURE SALAD P S, OLIVE FLAVORED**

**SALAD OILS IN BOTTLES AND CASES.**

WHITE AND YELLOW STEARINE.

## Scouring and Fulling Soap and Soap Stock.

## Cottonseed Cake and Meal

JOHN H. KENDALL, Manager, New Orleans, La.

LYMAN KLAPP, President, Providence, R. I.

OCEAN OIL CO. New York THE TIDE WATER PIPE CO., Lim. POLAR OIL CO. New York

# THE CHESTER OIL COMPANY,

## Refiners of Petroleum,

PRINCIPAL OFFICE,

S. E. COR. THIRD and WALNUT STREETS

City Department, 34 SOUTH DELAWARE AVENUE,

**PHILADELPHIA.**

**General Western Depot, Blue Island, Ill.**

CHICAGO OFFICE, 205 La Salle Street, Rooms 59 & 60. JOHN SINCLAIR, Agent.

NORTH WESTERN AGENCY, 908 & 910 Third St., South, Minneapolis, Minn.

# The Eagle Refining Company,

PRODUCERS, SHIPPERS AND REFINERS OF

## Petroleum and Its Products.

FOR DOMESTIC AND EXPORT TRADE.

Finest Grades of Engine, Machinery and Cylinder Oils. Railroad and Steamboat Oils a Specialty

Works, Cleveland, O. and Lima, O.

General Offices, Benedict Block,

CLEVELAND, O.

**Correspondence Solicited.**

# Pratt's Deodorized Stove Gasolene.

DEALERS in Gasolene Stoves are aware of the importance of having a pure and reliable article of gasolene to supply to their customers. As ordinarily prepared by refiners, Deodorized 74° Gasolene fails to give entire satisfaction, from its liability to gum and clog the burners. Wherever this occurs, endless annoyance ensues, and dissatisfaction with the stoves is the inevitable result. All this may be avoided by the use of **Pratt's Deodorized Stove Gasolene,** which is refined with the greatest care to insure absolute purity, and with due regard to the requirements of these stoves. Dealers can furnish this to their customers with the confidence that it will give perfect satisfaction. We guarantee that it will neither clog the burners nor emit any offensive odor.

At the request of many prominent manufacturers of these stoves, who were desirous that their patrons should know where to obtain the best article of gasolene, we take this means of informing the trade that we will furnish **Pratt's Deodorized Stove Gasolene** in any desired quantity, and packed either in barrels, half barrels, or in five-gallon cans and cases.

Address all orders and inquiries to

## Pratt Manufacturing Company

**26 BROADWAY, NEW YORK,**

SOLE PROPRIETORS AND REFINERS OF PRATT'S ASTRAL OIL.

## PETROLEUM MARKET.

TUESDAY EVENING, Sept. 4, 1888.

Although prices have ruled higher in the speculative market for certificates during the past week, the situation is not materially changed. While it is acknowledged on all sides that the situation warrants higher prices, and is daily growing stronger, the market fluctuates at the caprice of the operators, the investors outside of a small number who confine themselves to operations in oil, either failing to see that with present relations of production and consumption there must of necessity come an important increase in price, or they fear the power of the professional manipulators to cause a collapse as soon as the outside speculators are loaded with oil near the dollar mark. The fact that the consumption exceeds the production by over 20,000 bbls per day appears to go unheeded. If, under then existing conditions, oil was cheap a year ago at 60@65c, it is now cheaper still at 90@95c. The bulk of the business transacted on the several exchanges has been of the scalping character, and this class of operations has been brisk or otherwise as the regular operators have seen opportunities for profitable turns, they pursuing no definite plan, but being governed day by day by the existing conditions, operating on the bear side in the morning and on the bull side in the afternoon, or vice versa. To this class of operators the "statistical situation" means nothing if it does not induce outside operators to invest on the long side. The monthly summary of field operations published on Saturday, may have proved disappointing to some who had looked for a decrease in the number of new wells and in new production, but it should be remembered that the increase in new production is more than nullified by the increase in the production of the old wells, and this is not shown in the field reports. With a fair support the market would, no doubt, advance, and an increase appears to be confidently looked for by some of the best informed operators. The transactions during the past week show an increase over those of the previous week, the sales footing up 6,408,000 bbls against 4,923,000 bbls for the preceding week. The clearances of the local exchange amounted to 19,372,000 bbls, against 20,646,000 bbls during the preceding week. The total clearances reported for the other four exchanges amounted to 45,905,000 bbls against 46,373,000 bbls for the preceding week. The highest price of the week was reached to-day, when 95⅝c was touched. The lowest point of the week was 89⅝c, and was touched on Friday. The opening price last Wednesday was 92c, and the close this evening was at 94⅝c, showing a gain as the result of the week's trading of 1¼c, while the extreme range of fluctuations for the week was 5¾c.

The Ninevah well spliced its big cable last Tuesday, and resumed drilling on Wednesday morning. It has made as much as 200 bbls. a day, and is now doing 150 bbls. This running up and down is rather ominous for the well. No well-behaved oil well would drop so soon after being up or go up again once if it had got down.

In the Washington field John McKeown's Quail farm well is a little better than 5 bbls. a day in the 50-foot. It is doing 40, but what is a 40-bbl. well in this sand that has had its thousands? Sam Fergus' well on the Weir farm is delving in the fifty-foot with considerable gas but no show of oil. The sand is superior and ought to produce, which makes it unfavorable for the well.

At Bakerstown lamentation prevails. Senator Bradley's well on the Allison farm is broke down between the Butcher rock and the fourth sand. He is pushing on resolutely for the lower sand, determined to do his feelings additional violence by getting two dry sands in one well. Jennings & Roth found a dry butcher's rock in their Schlegel well on the Ewalt farm. This result was foreshadowed by the failure of the Bradley venture on the Samuel Allison farm. This makes the twelfth failure within the radius of a mile from the Butcher's well.

In the Clarion field Mr. Cadwallader's big well was making 25 bbls. an hour, which is an hourly decline of 5 bbls. from the registered gauge early last week. The well is making no water. The well is constantly agitated with sucker rods, and that acts as a leaven to it, causing it to flow three times an hour, and not twice, as stated. Under these circumstances, decline of course means exhaustion, and without the influence of agitation there can be no doubt but the decline would be even more rapid. There is one thing favorable to the longevity of the Clarion wells, if not conducive to large capacity, and that is the great depth of the sand. The stray, and the third, or fourth sand, as this may be, sometimes run together, forming a heavy body of rock, frequently 60 feet and upwards in thickness. The oil rock proper ranges from 30 to 35 feet in thickness, the lower 20 feet being oil bearing. A sample of sand from the second bit in Cadwallader's astonisher, is said to be the equal of anything found in Thorn Creek. The oil is 48½° Baume, and like the volatile products of the porous white sands, it is gaseous and sensitive both to heat and cold. Mr. Lord, who is one of the owners and manager of the wells, says the oil when produced with gas will hold water in solution rendering it difficult to handle in cold weather. This smacks of the fourth sand. On the other hand, pumped oil will readily separate from water all the season 'round, and this is a peculiarity of the third sand. The oil found in the boulder, which is sometimes oil-bearing, is green, while the product of the regular rock is inclined toward amber, another point in common with the fourth sand oil. The gravity of the oil, however, is lighter than the oil found either in the third or fourth sands and tallies closely with the Baltown and Kane oils found 900 and 1,200 feet below the Cadwallader horizon. The rock has a local dip south and east, which is both steep and irregular. Mr. Keitly, an experienced driller and producer, has noticed a dip of eight feet in 600. Extended to a mile this would amount to upwards of 40 feet to the mile; not an unusual dip in white sand areas, but the stronger the slope the sooner the end is reached. The salt water lurks suspiciously close about the edges. Some day this will rise up and displace the oil. Wm. H. Piper is building two rigs near the geyser, one of them on the Campbell lot, northeast of it, the other on the still house property near the distillery.

The summary of the field reports for August, which were published on Saturday, are as follows, and show an unexpected increase in production:

WELLS COMPLETED JULY, 1888.

| Field. | Wells com. | New Production. | Dry. |
|---|---|---|---|
| Bradford & Allegany | 2 | 9 | 0 |
| Middle Field | 3 | 15 | 2 |
| Venango & Clarion | 25 | 264 | |
| Butler & Armstrong | 30 | 334 | 16 |
| Washington, Allegheny & Greene | 22 | 557 | 7 |
| Total July | 82 | 1,179 | 25 |

WELLS COMPLETED AUGUST, 1888.

| Field. | Wells com. | New Production. | Dry. |
|---|---|---|---|
| Bradford & Allegany | 2 | 8 | 1 |
| Middle Field | 3 | 35 | 1 |
| Venango & Clarion | 24 | 296 | 8 |
| Butler & Armstrong | 32 | 912 | 7 |
| Washington, Allegheny & Greene | 35 | 573 | 19 |
| Total August | 96 | 1,824 | 36 |

Increase in number of completed wells, 14.
Increase in new production, 645 bbls.
Average of January producing wells, 22.
Average of February producing wells, 13.
Average of March producing wells, 66.
Average of April producing wells, 9.
Average of May producing wells, 60.
Average of June producing wells, 43.
Average of July producing wells, 13.
Average of August producing wells, 19.

RIGS UP AND DRILLING JULY 31, 1888.

| Field. | New Rigs. | Wells drill'g. | Total. |
|---|---|---|---|
| Bradford and Allegany | 3 | 2 | 5 |
| Middle field | 0 | 2 | 2 |
| Venango and Clarion | 21 | 23 | 44 |
| Butler and Armstrong | 11 | 39 | 50 |
| Washington and Greene | 11 | 58 | 69 |
| Total | 46 | 124 | 170 |

RIGS UP AND DRILLING AUGUST 31, 1888.

| Field. | New Rigs. | Wells drill'g. | Total. |
|---|---|---|---|
| Bradford and Allegany | 1 | 6 | 7 |
| Middle field | 1 | 3 | 4 |
| Venango and Clarion | 30 | 24 | 54 |
| Butler and Armstrong | 10 | 32 | 42 |
| Washington and Greene | 19 | 41 | 60 |
| Total | 61 | 106 | 167 |

Decrease in drilling wells, 18.
Increase in rigs, 15.
Net decrease, 3.

The total runs for the Buckeye Pipe Line Company for the month of August were 975,-23,485 bbls, and the shipments for the same time were 123,312·15 bbls. The average daily runs were 31,459·25 bbls, and the average daily shipments were 3,977·58 bbls. The total runs in 1888 up to September 1st were 5,261,732·97 bbls, and the total shipments up to date were 988,881·34 bbls.

*Wednesday, Aug. 29.*

The opening sale this morning at 92c showed a gain of ⅝c over the close of last evening, but dropped in a very short time to 91¼c, the lowest price reached to-day. There was little trading early in the day, and although the figures were kept below the opening price many dealers appeared to be of the belief that a decline was pending, and they would await further developments. About noon a better demand was noticeable, and the bidding appeared to become contagious, as there appeared to be no important orders, and the regular scalpers had no unusual incentive. Under good buying the price was run up to 92⅞c, and this remained the highest price of the day, the figures dropping as the bidding decreased. The close was at 92c, the range of fluctuations having been 1¾c. Trading as a whole was fair, but was mainly confined to scalping operations, the traders finding unusual opportunities to make favorable turns by the fluctuations. The sales footed up 1,-143,000 bbls. From the field came the report that the Haymaker & Co. well on the Harbison farm had been stopped, and does not show favorable. The Bradley well on the Allison farm was 15 feet in the sand and showed unfavorably. The Guckert No. 6 at Reibold was one bit in the sand, and flows at intervals. The Gauts No. 7 was expected in to-day.

The half-hourly quotations were as follows:

| A.M. | | P.M. | |
|---|---|---|---|
| 10:00 | 92 | 12:30 | 91⅞ |
| 10:30 | 91¾ | 1:00 | 92¼ |
| 11:00 | 91⅞ | 1:30 | 92⅛ |
| 11:30 | 91¾ | 2:00 | 92⅜ |
| 12:00 | 91¾ | 2:30 | 92⅛ |
| | | 3:00 | 92 |

The clearances were as follows: New York, 3,778,000; Oil City, 3,306,000; Pittsburg, 4,316,000 Bradford, 1,282,000; Philadelphia, 572,000; total clearances Aug. 29, 13,254,000 bbls.

Carrying rates were: New York, 10@15c; Oil City, 25c; Pittsburg, 15c; Bradford, 25c.

Market Aug. 30, 1887—61⅞@62½c.

*Thursday, Aug. 30.*

The opening this morning was easier, the first sale being effected at 91¾c, but fair bidding now caused the price to advance, and after about an hour's good trading the highest price of the day was reached at 92⅝c. From this point the drop to 92c was rapid, but at this price there were more buyers than sellers, and it was only after the almost complete withdrawal of bids that the price began to decline. As the figures dropped the scalpers put in their work, and the frequent fluctuations during the remainder of the day gave them the opportunities they desired. Toward the end of the session a slight scare drove the figures down sharply, and the lowest price of the day was reached at 90⅝c, the market closing at 90½c. This showed a loss for the day of 1¼c under a range of 2¼c. The trading was fair, but very irregular, and resulted in sales of 1,041,000 bbls. The field news was bullish in its tenor, although some bear operators based their hopes on the wells nearing the sand. The Haymaker well was abandoned when nearly 2,000 feet deep and the casing was pulled.

The half-hourly quotations were as follows,

| A.M. | | P.M. | |
|---|---|---|---|
| 10.00 | 91¾ | 12.30 | 92 |
| 10:30 | 91⅞ | 1:00 | 91½ |
| 11:00 | 91⅞ | 1:30 | 91⅞ |
| 11:30 | 92 | 2:00 | 91¾ |
| 12:00 | 92 | 2:30 | 91½ |
| | | 3:00 | 90½ |

The clearances were as follows: New York, 4,104,000; Oil City, 4,374,000; Pittsburg, 4,918,000; Bradford, 1,266,000; Philadelphia, 848,000; total clearances Aug. 30, 15,510,000 bbls.

Carrying rates were: New York, 20@25c; Oil City, 25@30c; Pittsburg, 30c; Bradford 25c.

Market Aug. 31, 1887—61⅞@65c.

*Friday, Aug. 31.*

There was no particular display of strength this morning although prices started upward steadily after the opening sale, which was at 90⅝c. Trading was fair and the fluctuations early in the day due to speculative efforts. During the noon hour there was a slight scare as a sudden drop to 90c developed a selling mania and soon the figures went to 89⅝c. This was the lowest point reached, as there were buyers to take all that was offered below 90c, the market reacting promptly and thereafter did not again go below 90c. Late in the day there was increased activity and the figures took a fresh start upward, which was accelerated by purchases to cover, and amid spirited bidding 9 ⅝c was scored as the highest price of the day, and the market closed strong at 92½c. This made a gain for the day of 2½c under a range to fluctuations of 3c. The sales footed up 1,345,000 bbls. From the field it was reported that the Thompson farm well at Taylorstown was torpedoed yesterday and is good for about 75 bbls a day. The Knox well on the Wallace lot in Taylorstown will make 50 bbls a day. Fergus' Weir farm well on Pigeon Creek was dry in the Gantz sand, but has a showing of oil in top of the fifty-foot. They are moving out the boiler. The cable was successfully spliced at the Ninevah and drilling resumed yesterday, and it is reported that the well has increased considerably. The Cadwallader well, Clarion, has suffered another decline. This time it is from 27 bbls an hour yesterday morning to 5 bbls an hour this afternoon.

The half-hourly quotations were as follows:

| A. M. | | P. M. | |
|---|---|---|---|
| 10:00 | 90⅝ | 12:30 | 90¼ |
| 10:30 | 90⅝ | 1:00 | 90⅝ |
| 11:00 | 90¾ | 1:30 | 90¼ |
| 11:30 | 90 | 2:00 | 90¼ |
| 12:00 | 90¼ | 2:30 | 90⅛ |
| | | 3:00 | 92¼ |

The clearances were as follows: New York, 3,162,000; Oil City, 3,152,000; Pittsburg, 3,698,000; Bradford, 1,132,000; Philadelphia, 768,000; total clearances August 31, 11,912,000 bbls.

Carrying rates were: New York, 20@25c; Oil City, 30@35c; Pittsburg, 25c; Bradford, 25c.

Market Sept. 1, 1887—63½@65¾c.

*Saturday, Sept. 1.*

Some of the shorts appeared a little nervous this morning and in the effort to cover developed 92⅞c as the opening price. This was more than the regular traders cared to pay and the market was allowed to drop for want of bids, the price falling to 92½c, but as it was plain the longs proposed to retain their advantage further holding back was abandoned, as there were not many who cared to remain short under present circumstances until Tuesday, with a prospective bull movement staring them in the face. As bidding increased the price was rapidly advanced, and shortly before noon reached 93¼c, but then eased off a trifle the market closing at 93¼c. This made a gain of ⅝c under a range of 1c. Trading was fair and resulted in sales of 781,000 bbls. The fluctuations were due to the operators and the advance to the anxiety of shorts to get under cover, there being no news to influence the market. The reports from the field were that the Ninevah well had drilled since Wednesday and increased to about 150 bbls a day. The Fergus well on the Weir farm and the well on Pigeon creek were three hits in the sand showing a moderate amount of gas but no oil. The McKeown, Quail, No. 5 was in the 50-foot sand doing 40 bbls a day.

The half-hourly quotations were as follows:

| A. M. | | A. M. | |
|---|---|---|---|
| 10:00 | 92⅞ | 11:00 | 92⅞ |
| 10:30 | 93 | 11:30 | 92⅞ |
| | | 12:00 | 93¼ |

The clearances were as follows: New York, 4,866,000; Oil City, 4,316,000; Pittsburg, 3,747,000 Bradford, 1,132,000; Philadelphia, 782,000; total clearances Sept. 1, 14,843,000 bbls.

Carrying rates were: New York, 15@20; Oil City, 30@35c; Pittsburg, 35c; Bradford, 25@30c.

Market Sept. 2, 1887—64@65⅝c.

*Tuesday, Sept. 4.*

The first sale this morning was made at 93⅜c, but as there appeared to be little disposition to operate freely, the price gradually dropped until 92⅜c was reached, which was the lowest point touched. It soon after becoming apparent that some of the Western operators were in need of oil and were buying wherever possible, the price was rapidly advanced, the orders received being supplemented by fairly active bidding on the part of the local operators, and in their train followed the irrepressible pikers. Under this stimulus the price soon went above 94c, and later 95c was passed, the highest price recorded being 95⅝c, which figure was reached amid considerable excitement. The reaction that followed was not pronounced, the figures fluctuating around 95c under moderately active trading, the market finally closing firm at 94⅝c. This made a gain for the day of 1c under a range to quotations of 2¼c. The sales footed up 2,008,000 bbls. The news from the field had no influence; in fact, it was entirely overshadowed by the importance atrached to Western operations. The Crawford No. 3, at Saxonville, was doing 10 bbls per hour. The Jennings well, on Brush Creek, was expected to come in to-day. The Fisher well, at Bakerstown, was delayed by leaky casing. The Bradley well, on the Allison farm, was in the fourth sand, showing some oil. The Ewalt well was fishing. The Calhoun well, on the Gibson farm, is dry.

The half-hourly quotations were as follows:

| A.M. | | P.M. | |
|---|---|---|---|
| 10:00 | 93⅝ | 12:30 | 94¾ |
| 10:30 | 93 | 1:00 | 94¾ |
| 11:00 | 93¼ | 1:30 | 94¾ |
| 11:30 | 93¼ | 2:00 | 94⅜ |
| 12:00 | 94⅜ | 2:30 | 94⅝ |
| | | 3:00 | 94⅜ |

The clearances were as follows: New York, 3,462,000; Oil City, 2,480,000; Pittsburg, 2,488,000; Bradford, 782,000; Philadelphia, 546,000; total clearances Sept. 4, 9,758,000 bbls.

Carrying rates were: New York, 10@15c; Oil City, 20@25c; Pittsburg, 25@30c; Bradford, 30c.

Market Sept. 3, 1887—64⅜@65½c.

The amount of daily sales and total for the week follow:

| Date. | Bbls. |
|---|---|
| Aug. 29 | 1,143,000 |
| " 30 | 1,041,000 |
| " 31 | 1,345,000 |
| Sept. 1 | 781,000 |
| " 3 | |
| " 4 | 2,008,000 |
| Total for the week | 6,408,000 |

Following is given the opening, highest, lowest and closing figures for each day, in tabulated form for comparison:

| | Opening. | Highest. | Lowest. | Closing. |
|---|---|---|---|---|
| Aug. 29 | 92 | 92⅞ | 91½ | 92 |
| " 30 | 91¾ | 92⅝ | 90⅝ | 90½ |
| " 31 | 90⅝ | 92⅝ | 89⅝ | 92¼ |
| Sept. 1 | 92⅞ | 93½ | 92⅜ | 93¼ |
| " 3 | | Holiday. | | |
| " 4 | 93⅜ | 95⅝ | 92⅞ | 94⅜ |

The total clearances during the week at the several petroleum exchanges foot up as follows:

| | | |
|---|---|---|
| New York | 19,372,000 | |
| Oil City | 17,628,000 | |
| Pittsburg | 19,167,000 | |
| Bradford | 5,594,000 | |
| Philadelphia | 3,516,000 | |
| | | 45,905,000 |
| Total | | 65,277,000 |

The demand for refined in barrels for export has been steady, and notwithstanding that the week under review comprises but five days, the sales foot up over 100,000 bbls. The continued scarcity of desirable vessels also tends to restrict trade and several vessels formerly engaged in the coasting trade have been pressed into the service of carrying petroleum to foreign ports. Shippers have not hesitated to place orders whenever freight room could be secured, and vessels at Baltimore and Boston have been taken to load at those ports. The demand is expected to continue active for some time to come, as notwithstanding previous large shipments the stocks abroad have not increased. The price of 70° Abel test has remained steady at 7½c until to-day, when an

advance to 7¾c was announced for all loadings. The principal foreign markets are also higher, to-day's quotations by cable being: Antwerp, 20½f; Bremen, 7.95m; London, 7⅝@7¾d, and Liverpool, 7¾@8d. Freight rates still rule very high, the rate to London being 3s 6d@4s as to vessel, although during the week charters have been made at 3d less. To continental ports the range is 3s 6d@4s 6d as to port and vessel. Home trade lots have been in fair seasonable request, and rule very firm at outside figures. We quote 83¼@87½c for State legal test; 81¼@71½c for 110 test; 8¾@85½c for New York City 100° flash, and 9¾@10c for 150° water white. Western lots are held firm at the same figures.

Cases for export have not been in request and the sales reported barely reach 100,000. The price continued steady at 9⅝c for plain tops, but was to-day advanced to 9¾c. Freight rates continue high, with desirable vessels are scarce. The nominal rates for large vessels are: For Java, 40@41c; Japan, 32@33c; Calcutta, 25@27c; Bombay, 24@25c; Rangoon, 28@29c; Singapore, 32@33c; Hong Kong, 30@31c; and for Shanghae, 31@32c.

Crude in barrels for export has received little attention and only a few small sales are reported. Prices have been advanced to 6¾c for Bradford and 7½c for Parker. Cases for export continue neglected, and no sales are reported. Prices are firm at 8¾@9⅜c.

Prime city naphtha has been steady and firm at 7¼c. For export there has been no demand, and only a few small sales are reported.

Western residuum is quoted at 1¾@2c f. o. b. Barrels are quoted at 5@5½c. No sales are reported for export.

## Closing Quotations.

CRUDE.

| | | |
|---|---|---|
| National Transit Certificates | ℔ bbl. | 94¾@ 94½ |
| In bbls | ℔ gal. | 6¾@ 7⅜ |
| In cases | | 8¾@ 9⅜ |
| Residuum, bbls, for export 18@22°. | | 5½@ 6 |
| for domestic use f o b | | 1¾@ 2 |

REFINED, IN BARRELS.

| | | |
|---|---|---|
| Cargo lots, Abel test | ℔ gal. | 7¾@ — |
| Philadelphia loading | | 7¾@ -- |
| Baltimore loading | | 7¾@ — |
| 50 bbl lots, f. o. b. or on dock | | 8¾@8⅞ |
| 10 bbl lots, f. o. b. or on dock | | 8⅞@9⅛ |

HIGH TEST OILS—JOBBING LOTS.

| | | |
|---|---|---|
| 110 fire test, S. W | ℔ gal. | 8¾@ — |
| 120 fire test, S. W | | 8¾@ — |
| 130 fire test, S. W | | 8⅝@ — |
| State test | | 8¾@ — |
| 150 fire test, W.W | | 9¾@10 |
| 300 fire test | | 10¼@11½ |
| New York city, 100 flash | | 8⅜ |

REFINED IN CASES, 110 FIRE TEST.

| | |
|---|---|
| Two-five, low screw, 10,000 lots | 9¼@ — |
| 5,000 to 10,000 | 9¼@10 |
| 1,000 to 5,000 | 10 @10¼ |
| 200 to 1,000 | 10¼@10½ |
| Under 200 | 10½@10¾ |

NAPHTHA AND GASOLINE.

| | |
|---|---|
| Naphtha, crude, cargo lots, 68@72 deg | —@ 7¼ |
| Naphtha, crude, car lots, 68@72 deg | 7¾@ 7½ |
| Naphtha, crude, 70 deg | 8½@ 9⅛ |
| Sweet, 62 deg | 8½@ 9½ |
| 70 deg | 9 @10 |
| 76 deg | 9½@10½ |
| Gasoline, 86 deg | 13 @14 |
| 88 deg | 15 @16 |
| 90 deg | 18 @19 |

EMPTY PETROLEUM BARRELS.

| | |
|---|---|
| Cargoes, spot | $1 02½@1 05 |
| Domestics, on dock | 1 00 @1 02½ |
| Subject to inspection | 1 05 @ — |

## Petroleum Statistics.

RUNS—TOTAL AND AVERAGE.

| | Day. | Total. | Av'ge |
|---|---|---|---|
| Mon. Aug. 27 | 49,332 | 1,014,193 | 37,563 |
| Tues. " 28 | 56,919 | 1,071,112 | 38,254 |
| Wed. " 29 | 58,043 | 1,129,156 | 38,936 |
| Thurs. " 30 | 73,491 | 1,202,647 | 40,088 |
| Frid. " 31 | 82,911 | 1,285,558 | 41,469 |
| Sat. Sun. 1 & 2 | | | |
| January, 1888 | | 1,048,641 | 33,827 |
| February | | 1,175,102 | 40,529 |
| March | | 1,193,133 | 38,488 |
| April | | 1,200,977 | 40,032 |
| May | | 1,301,015 | 41,968 |
| June | | 1,289,616 | 42,987 |
| July | | 1,260,486 | 40,660 |
| August, 1887 | | 1,745,629 | 56,311 |
| September | | 1,648,421 | 54,947 |
| October | | 1,751,676 | 56,506 |
| November | | 1,125,390 | 37,513 |
| December | | 1,223,648 | 39,472 |
| Year, 1887 | | 20,209,983 | 55,315 |

DELIVERIES—TOTAL AND AVERAGE.

| | Day. | Total. | Av'ge |
|---|---|---|---|
| Mon. Aug. 27 | 99,487 | 1,806,126 | 66,893 |
| Tues. " 28 | 76,511 | 1,882,637 | 67,237 |
| Wed. " 29 | 71,320 | 1,953,957 | 67,377 |
| Thurs. " 30 | 65,374 | 2,019,331 | 67,311 |
| Frid. " 31 | 86,012 | 2,105,343 | 67,914 |
| Sat. Sun. 1&2 | | | |
| January, 1888 | | 2,225,975 | 71,806 |
| February | | 2,115,803 | 72,938 |
| March | | 1,980,963 | 63,902 |
| April | | 1,830,523 | 61,017 |
| May | | 1,676,794 | 54,090 |
| June | | 1,677,330 | 55,911 |
| July | | 1,933,873 | 62,383 |
| August, 1887 | | 2,118,647 | 68,343 |
| September | | 2,140,295 | 71,343 |
| October | | 2,383,707 | 76,894 |
| November | | 2,403,307 | 80,777 |
| December | | 2,419,617 | 78,052 |
| Year, 1887 | | 25,519,175 | 69,916 |

CHARTERS—TOTAL AND AVERAGE.

| | Day. | Total. | Av'ge. |
|---|---|---|---|
| Mon. Aug. 27 | 39,087 | 1,071,183 | 39,674 |
| Tues. " 28 | 43,968 | 1,151,151 | 39,828 |
| Wed. " 29 | 42,341 | 1,137,492 | 39,915 |
| Thurs. " 30 | 45,316 | 1,202,888 | 40,096 |
| Frid. " 31 | 19,047 | 1,221,935 | 39,417 |
| Sat. Sun. 1&2 | 71,269 | 71,269 | 35,634 |
| January, 1888 | | 914,199 | 29,490 |
| February | | 1,199,160 | 41,351 |
| March | | 998,923 | 32,223 |
| April | | 973,208 | 32,440 |
| May | | 1,257,607 | 40,568 |
| June | | 1,219,188 | 40,640 |
| July | | 1,339,147 | 42,908 |
| August, 1887 | | 1,647,254 | 53,138 |
| September | | 1,302,513 | 43,417 |
| October | | 1,411,578 | 45,542 |
| November | | 1,120,709 | 37,357 |
| December | | 1,011,903 | 32,655 |
| Year, 1887 | | 15,204,735 | 41,657 |

CHARTERS FOR THE WEEK.

The total charters for refined in barrels and cases, crude in barrels and cases, naphtha, &c., during the week ending September 4, were as follows:

| | |
|---|---|
| Refined, bbls | 112,600 |
| Refined, cs | 104,500 |
| Crude, bbls | 8,500 |
| Crude, cs | |
| Naphtha, bbls | 3,000 |
| Residuum, bbls | |
| Lubricating | |
| Total, crude equivalent | 222,021 |

CLEARANCES FOR THE WEEK.

During the week ending Sept. 3, the clearances of petroleum, in gallons, from the port of New York were as follows:

| | |
|---|---|
| Refined | 227,039,829 |
| Crude | 22,038,024 |
| Naphtha | 4,070,043 |
| Residuum | |
| Total | 253,147,896 |

EXPORT STATISTICS.

The following table shows the total exports from the port of New York and from the United States, reduced to crude equivalent, in gallons, for the week ending August 25; also, the total shipments to date, with comparisons with 1887:

| | |
|---|---|
| Exports from New York for week ending Aug. 25 | 11,320,337 |
| Total exports from New York from Jan. 7, 1888 | 282,840,497 |
| Same period last year | 316,849,311 |
| Decrease | 33,008,814 |
| Exports from U. S. for week ending Aug. 25 | 18,465,370 |
| Total exports from U. S. from Jan. 1, 1888 | 389,284,163 |
| Same period last year | 432,353,363 |
| Decrease | 43,069,200 |

TOTAL EXPORTS FROM DIFFERENT PORTS.

| | 1888. | 1887. |
|---|---|---|
| New York | 282,340,497 | 316,849,311 |
| Philadelphia | 99,086,845 | 109,282,623 |
| Baltimore | 3,785,539 | 4,186,633 |
| Boston | 1,838,009 | 2,034,795 |
| Perth Amboy | 1,713,533 | ..... |
| San Francisco | 19,680 | ..... |
| Grand total | 389,284,163 | 432,353,363 |

CAPACITY OF VESSELS LOADING.

The following table gives the capacity of the vessels loading petroleum at the ports of New York, Philadelphia, Baltimore and Boston on September 3:

| | NEW YORK. | | PHILADELPHIA. | |
|---|---|---|---|---|
| | Bbls. | Cases. | Bbls. | Cases. |
| Refined | 183,800 | 254,000 | 61,800 | 20,000 |
| Crude | 29,800 | .... | 29,406 | .... |
| Naphtha | 8,700 | .... | 4,500 | .... |
| Total | 222,300 | 254,000 | 95,700 | 20,000 |

| | BALTIMORE. | | BOSTON. | |
|---|---|---|---|---|
| | Bbls. | Cases. | Bbls. | Cases. |
| Refined | 2,500 | .... | 5,300 | .... |
| Crude | .... | .... | .... | .... |
| Naphtha | .... | .... | .... | .... |
| Total | 2,500 | .... | 5,300 | .... |

## Foreign Statistics.

REFINED QUOTATIONS.

| | Antwerp. | Bremen. | London. |
|---|---|---|---|
| Wed. Aug. 29. | 20½@— | 7.95 | 7⅝@7½ |
| Thur. " 30. | 20½@— | 7.95 | 7⅝@7½ |
| Fri. " 31. | 20½@— | 7.90 | 7½@7⅝ |
| Sat.. Sept. 1. | 20½@— | 7.90 | 7½@7⅝ |
| Mon. " 3. | 20½@— | 7.95 | 7½@7⅝ |
| Tues. " 4. | 20½@— | 7.95 | 7⅝@7¾ |

STOCKS, RECEIPTS AND SHIPMENTS.

The statistical situation at the seven principal continental ports on August 18, was:

| | 1888. | 1887. |
|---|---|---|
| Stock, Aug. 18 | 507,610 | 814,592 |
| Afloat " | 210,409 | 258,555 |
| Loading " | 236,750 | 201,300 |
| Total | 954,769 | 1,274,447 |
| Receipts Aug. 11 to Aug 18 | 44,285 | 10,353 |
| Rc'ts July 1, '88, to Aug 18, '88. | 578,208 | 787,482 |
| Shipments Aug. 11 to Aug 18. | 67,277 | 86,381 |
| Shp's July 1, '88, to Aug 18, '88 | 442,909 | 446,384 |

At London the statistical situation on the same date was made up as follows:

| | 1888. | 1887. |
|---|---|---|
| Stock, Aug. 18 | 149,136 | 155,774 |
| Afloat " | 39,000 | 39,700 |

## Exports of Petroleum from New York

### REFINED.

| COUNTRIES. | Week Ending Sept. 3 Gals. | Jan. 1 to Aug 27, 1888. Gals. | Jan. 1 to Aug 29, 1887. Gals. |
|---|---|---|---|
| Africa, Liberia | | 25,653 | 22,040 |
| Sierre Leone | | 50 | |
| South Africa | 52,930 | 839,855 | 1,312,991 |
| Zanzibar | | 353,500 | 300,000 |
| Algiers | | 1,197,140 | 805,870 |
| Arabia | | 190,000 | 1,150,000 |
| Argentine Republic | 32,000 | 1,982,953 | 2,383,750 |
| Australia | | 5,843,855 | 3,034,843 |
| Austria | | 14,155 | 276,700 |
| Belgium | | 18,706,002 | 19,276,433 |
| Brazil | 214,350 | 5,820,536 | 4,187,238 |
| British East Indies, Aden | | 445,000 | 270,000 |
| Burmah | | 1,992,980 | 1,737,860 |
| India | | 17,162,840 | 15,067,940 |
| Penang | | 630,000 | |
| Singapore | | 1,297,558 | 1,076,760 |
| British Guiana | 112,000 | 200,049 | 388,371 |
| British West Indies, Antigua | | 29,250 | 25,600 |
| Barbadoes | 5,500 | 241,956 | 160,870 |
| Basse Terre | | 41,220 | 129,904 |
| Bermuda | | 79,493 | 73,621 |
| Domenica | | 7,620 | 19,890 |
| Jamaica | | 418,247 | 348,254 |
| Montserrat | | 3,450 | 3,200 |
| Nassau | | 42,734 | 35,346 |
| St. Lucia | 1,150 | 22,886 | 12,802 |
| St. Vincent | | 19 945 | 25,745 |
| Trinidad | 300 | 187,260 | 176,481 |
| All others | 12,600 | 56,905 | 17,476 |
| Canary Islands | 30,100 | 102,250 | 101,440 |
| Central America, Belize | | 44,396 | 56,802 |
| Costa Rica | | 61,072 | 42,021 |
| Guatamala | | 44,478 | 65,696 |
| Honduras | | 23,543 | 24,252 |
| Nicaraugua | | 110,908 | 180,176 |
| San Salvador | | 44,970 | 62,062 |
| Chili | | 2,333,000 | 1,156,165 |
| China, Cochin | | 2,306,750 | 1,930,546 |
| All other | | 9,568,850 | 10,636,898 |
| Cuba | 4,000 | 434,342 | 458,573 |
| Danish West Indies | 250 | 33,224 | 30,189 |
| Denmark | | 3,209,990 | 3,042,991 |
| Dutch East Indies, Java | 320,000 | 11,618,520 | 13,983,430 |
| Macassar | | 73,140 | 256,000 |
| Sumatra | | 325,000 | 350,000 |
| Dutch West Indies | 171 | 75,871 | 63,686 |
| Dutch Guiana | | 94,581 | 20,400 |
| Ecuador | | 93,150 | 73,970 |
| England | 881,024 | 25,263,891 | 29,310,282 |
| Egypt | | 498,150 | 3,307,490 |
| France | 148,254 | 721,256 | 1,579,740 |
| French Guiana | | 17,100 | 16,970 |
| French West Indies | | 294,527 | 282,455 |
| Germany | 3 459,773 | 58,141,647 | 51,739,190 |
| Gibraltar | | 327,000 | 547,419 |
| Greece | | | 120,000 |
| Hawaiian Islands | | 100,000 | 30,640 |
| Hayti | 20,111 | 249,178 | 15 ,469 |
| Ireland | | 2,485,983 | 3,682,802 |
| Italy | | 627,987 | 1,303,651 |
| Japan | | 6,955,610 | 8,074,110 |
| Mexico | | 56,001 | 696,254 |
| Malta | | 130,880 | 473,000 |
| Mauritius Island | | 14,750 | |
| Netherlands | 541,841 | 14,537, 00 | 24,478,239 |
| North America, New Brunswick | 26,000 | 367,135 | 389,151 |
| New Foundland | 500 | 164,478 | 110,938 |
| Nova Scotia | 101,310 | 93,181 | 125,356 |
| Prince Ed. Island | | 112,450 | 161,250 |
| Norway and Sweden | 134,093 | 4,695,583 | 5,795,087 |
| Peru | | 210,829 | 98,978 |
| Porto Rico | 11,800 | 474,945 | 364,740 |
| Phillippine Islands | | 317,000 | 222,640 |
| Portugal | | 700,648 | 524,080 |
| Reunion | | 74,500 | 72,000 |
| Russia | | 145,830 | 95,874 |
| Scotland | | | |
| Siam | | 837,050 | 530,680 |
| Spain | | 175,700 | 702,190 |
| Turkey | | 435,764 | 2,094,894 |
| U. S. of Col | 18,319 | 464,880 | 370,765 |
| Uruguay | 38,500 | 900,790 | 2,448,823 |
| Venezuela | 2,750 | 536,689 | 675,701 |
| Wales | | 143,766 | 1: 1,348 |
| Total | 6,148,387 | 209,081,699 | 227 ( 39,829 |

### CRUDE.

| COUNTRIES. | Week Ending Sept. 3 Gals. | Jan. 1 to Aug 27. 1888. Gals. | Jan. 1 to Aug 29. 1887. Gals. |
|---|---|---|---|
| Australia | | | |
| Austria | | | |
| Belgium | | | |
| Brazil | | | |
| British Guiana | | | |
| British West Indies | | 248 | |
| Chili | | | 10.000 |
| Central America | | | 499 |
| Cuba | 120,000 | 1,891,031 | 3,171,673 |
| Danish West Indies | | | |
| Dutch West Indies | | | |
| England | | | 213,217 |
| France | | 14,181,644 | 11,067,295 |
| Germany | | 1,230,503 | 1,084,659 |
| Hawaiian Islands | | | 2,525 |
| Mexico | | 797,240 | 670,830 |
| British North America | | | |
| Norway and Sweden | | 187,220 | |
| Spain | | 7,548,282 | 5,817,317 |
| Uruguay | | | |
| Total | 120,000 | 25,788,974 | 22,038,024 |

### NAPHTHA.

| COUNTRIES. | Week Ending Sept. 3 Gals. | Jan. 1 to Aug 27, 1888. Gals. | Jan. 1 to Aug 29. 1887. Gals. |
|---|---|---|---|
| Africa | | | 96 |
| Algiers | | | 5,000 |
| Argentine Republic | | 1,625 | |
| Australia | | 48 | |
| Belgium | | 223,244 | 184,500 |
| Brazil | | 12,540 | 1:0,831 |
| British West Indies | | | 196 |
| Central America | | | |
| Chili | | 237 | 78 |
| Cuba | | | |
| Denmark | | | |
| England | | 1,923,206 | 2,278,065 |
| France | 434,198 | 1,542,616 | 1,052,261 |
| Germany | | 525,360 | |
| Hayti | | | 10 |
| Ireland | | | 5,118 |
| Mexico | | | |
| British North America | | 1,800 | 2,050 |
| Norway and Sweden | | 348,873 | 401,870 |
| Portugal | | 4,850 | 975 |
| Russia | | | |
| Turkey | | | |
| Uruguay | | | |
| Venezuela | | | 19,000 |
| Total | 434,198 | 4,450,848 | 4,070,043 |

| | | |
|---|---|---|
| Loading " | 87,800 | 23,000 |
| Total | 275,936 | 218,474 |
| Receipts Aug 11 to Aug 18 | | |
| Rec'ts July 1,'83, to Aug 18, '88 | 62,186 | 126,778 |
| Shipments Aug 11 to Aug 18 | 7,684 | 10,221 |
| Shp'ts July 1,'88, to Aug 18, '88 | 55,833 | 67,494 |

## Petroleum Charters.

Following is a list of vessels chartered and loading or to load petroleum at New York, Philadelphia, Baltimore and Boston:

NEW YORK. — Bbls. Refd.

June 22
It bk Alfredo, Java or Singapore, p t.cs 30,000

July 2
Br bk Sarah Chambers, Hamb'g, 2s 3¾d. 6,000

July 6
It bk Antoinetta, Java, 30 & 31c ... ...cs 34,000
Ger sh J Weissenhorn, Continent, 2s 6d.. 13,000

July 13
Am sh Glendon, Japan, p t.... .....cs 65,000
Ger sh Deutschland, Continent, p t..... 7,500
Ger bk Germania, Cont or Baltic, p t..... 5,000

July 14
Br bk Laura Emily, U K, p t..... .... 4,500

July 16
Am sh Saml. Scolfield, Calcutta, 20½c..cs 60,000

July 20
Ger ship Barbarossa, Continent, p t..... 8,500
Ger ship Oberon, Continent, p t..... 8,000
Ger bk Marie, Continent, p t..... 8,000
Ger ship Camelia, U K or Cont, p t..... 7,500

July 23
Br bk Lewis Smith, U K or Cont, pt..... 6,500
Am sh L A Nichols, Japan, 33c.....cs 50,000

July 24
Ger shp Dora, Bremen or Hamburg, p t. 8,700
Br bk Galatea, Continent, p t.. ..... 8,000
Ger bk Astronom, Continent, p t..... 5,300
Am shp Wildwood, Japan, p t..... ..cs 60,000
It bk Plinio, Java, p t.....cs 45,000
It bk Rosa, Waterford, 3s 6d..... 3,000
Br sh Silberhorn, Liverpool, 3s..... 11,000
Br bk Savannah, Bristol, 3s 6d. .. .. .... 4,500
Ger bk Stralsund, Ger Baltic, 3s 6d.. .... 3,500

July 26
Am sh Chas. Dennis, Calcutta, pt.....cs 60,000

July 27
Br sh Beaconsfield, Antwerp or London, 3s..... 10,000
Br bk Veronica, Continent, p t,..... 9,500
Br sh Avonia, Continent. p t.... ..... 10,500

July 28
Aus bk Leonora, China sea, p t.....cs 55,000
Br sh Vandalia, U K or Cont, p t..... 9,700
Br sh Marlborough, U K or Cont, p t. .. 8,000
Br sh Z King, U K or Cont, 3s 3d..... 8,400
Br sh Harvest Queen, London, 3s..... 12,000
Br sh Cumberland, U K or Cont, p t..... 9,500
Br bk Wolfe, Havre, 4s 3d. .... .....cde 6,000

July 30
Dtch bk Melati, Cont, pt..... .. 6,600
Nor bk Lorley, Baltic, pt..... 3,300
Nor sh B D Metcalf, Cont, pt..... 7,800
Nor sh N B Palmer, Cont, pt..... 6,400
Bk —, Irish port, 4s..... 4,500

July 31
Br sh Austria, London, 3s..... 12,000
Br sh Revolving Light, Bristol, 3s 3d..... 8,500
Nor bk Ajax, Cont, pt..... 5,100
Nor bk Tordenskjold, Cont, pt..... 7,500

Aug 1
Swed bk Freia, Baltic, p t..... 4,000
Nor bk Ariadne, Bergen, 2s 11d..... ... 4,000
Nor bk Arracon, Danish port, 3s 3d..... 4,500
Ger bk Cuba, Continent, 3s 3d..... 7,200
Am bk Edward Kidder, Penang or Singapore, p t.....cs 32,000

Aug 2
Br bk Levuka, Cont, 3s..... 9,000
Br sh J I Smith, London or Ant'p, 3s 3d.. 8,400

Aug 3
Br sh Br America, Bordeaux, 4s 3d...cde 6,000
Br bk Scotland, Cont, pt..... 9,000
Br sh Beethoven, Cont, pt..... 6,000
Br sh Servia, Continent, p t ..... 8,500
Br sh Conductor, London or Antwerp,p t 7,000
Br bk Nimbus, U K or Continent, p t.... 7,500

Aug 4
Br sh Record, L'pool or Bristol, 3s 4½d... 12,000
Ger bk Blucher, Bremen, Hamburg or Antwerp, 3s 3d@3s 4½d..... 7,200

Aug 6
Br bk Avoca, U K or Cont, p t..... .... 9,500
Am sh Caravan, Rotterdam or Antwerp, 3s 6d .. ..... 9,200

Aug 7
Br bk M & E Cox, Bristol, p t..... 7,000
Br bk John Trakey, Antwerp, Rotterdam or Amsterdam, 3s 7½d.... ..... 7,600
Br sh McDougall, Antwerp, Rotterdam, or Amsterdam, 3s 7½d..... ..... 7,100
Br sh Joseph, Continent, 3s 3d..... 10,000
Br bk Landskrona, Continent, 3s 3d..... 8,500
Br sh Ellerslie, London, 3s 6d..... 9,000

Aug 8
Br bk Peacemaker, London, 3s 6d..... 6,700
Nor str Balder, Baltic, 4s 6d..... 2,400
Br sh Annie E Wright, Antwerp, 3s..... 11,000
Br bk Canute, Continent, p t..... 7,500
Br bk Granville Bell, Continent, p t..... 6,800
Br bk Snow Queen, Continent, p t..... 6,000
Br bk Annie J Marshall, Continent, p t.. 6,500
Br sh Colchester, U K or Cont, p t..... 8,500
Br bk Truro, U K or Cont, p t. ... .... 5,400
Am bk Jessie McGregor, U K, 4s..... 3,500
Am bk Obed Baxter, Java, p t... ....cs 32,000

Aug 9
It bk —, Marseilles, 4s.....cde 4,000

Aug 10
Am bg Amy A Lane, Bristol, p t..... 2,400
It bk Gemma C, Java, p t.....cs 28,000

Aug 11
Nor bk Alice, Baltic, 3s..... 6,000

Aug 14
Am sh Alice D Cooper,Java,40,41 & 42c.cs 45,000

Aug 15
Br bk Ruth Palmer, Dunkirk, 3s 9d...cde 6,000

Aug. 16
Br bk Algorna, Havre, 4s 6d.....cde 8,500
Br bk Raguar, Liverpool, 3s 10½d....nap 6,000
Am sh Fawn, Dutch port, 4s..... ..... 6,000
It bk Giacle, Cette, 4s 9d.....cde 4,500

Aug 17
It bk Virgine de'la Guardia, Marseilles, 3s 9d.....cde 5,000
It bk San Francisco, Marseilles, 3s 9d.cde 5,000

Aug 18
It bk Marie Christina, Marseilles, 4s 3d... 2,500
It bk La Marinccia,Marseilles or St Louis du Rhone, 4s 3d@4s 6d.... .....cde 3,600

Aug 20
Span str Gaditano, Continent, 4s 3d..... 12,500
Nor bk Alsen, Baltic, 3s 10½d..... ..... 3,000
Nor bk Margaretha Blanca, Baltic, p t... 3,500

Aug 21
Br sh E J Spicer, U K or Cont, p t..... 7,800
It bk Marie, Marseilles, 4s 9d, or St. Louis du Rhone, 5s..... 2,400
Am bk Vidette, St Louis du Rhone, 5s..... .....cde 3,600

Aug 22
Nor bk Guldbringa, Baltic, p t..... 4,200
Nor bk Mod, Christiania, 5s 3d..... .... 3,000
Br sh Falls of Halladale, Calcutta, p t.cs 80,000
It sh Columbus, Marseilles, 4s 11d.....cde 7,500

Aug 23
Ger bk Duppel, Baltic, p t..... 3,500
Br bg L Montgomery, Algiers, 26½c....cs 7,500
Dutch bk Martena Johanna, U K or Cont, p t..... .... 5,000
Br sh ——, U K, 3s 3d..... 9,000
Br sh ——, U K, 3s 3d..... .... .... 8,000
Br sh ——, U K, 3s 3d.... ... . ..... ... 7,000
Am bk Belle Wooster, Irish port, p t..... 2,000
Span str El Dorado, Rouen, 4s 10½d..cde 6,000

Aug 24
Nor bk Anna, Christiana, p t..... . 2,700
Am sh Therese, Cette, 5s.....cde 6,000
Span str Navarro, U K or Cont, 4s 3d..... 14,000
Span str Suskaro, U K or Cont, 4s 4½d... 9,000

Aug 25
Br sh Warsaw, Havre, 4s 6d.....cde 7,000

Aug 27
Am bg Tarifa, Dublin, 4s 6d..nap 250 and 2,500
Br bk Kings County, Dieppe, 4s 6d....cde 5,500
Br bk Avonmore, Continent, p t..... 8,500
It bk Rosa Madre, French port, p t...cde 5,500

Aug 28
Br bk Annie J Marshall, Rotterdam, pt. 7,000
Nor bk Lorcley, Baltic, pt..... 3,000

Aug 29
Am sch Gen S E Merwin, Blaye, 4s 6d.cde 4,600
Am bg Daisy Boynton, Galway or Limerick, 5s ..... ..... 2,300

Aug 30
Br bk Lady Lisgar, Bristol or London, 3s 3d, or Liverpool, 3s 6d..... 7,000
Ger str Taormina, Hamburg, pt..... 11,000

Aug 31
Am bk John F Rottman, Bristol Channel, 4s..... 3,000
Br bk Lioness, Baltic, pt .... ..... 3,500
Br bk Lewis Smith, U K or Cont, pt..... 6,500

Sept 1
Nor bk Ingolf, U K, 4s 4½d..... 2,000
Am bk F T Stinson, Bristol Channel, $12,000..... 6,000

PHILADELPHIA.

June 28
Swed sh Edward, Cont, pt..... 8,000

July 2
Grk bk Hawkeye, Cagliari, f o, 15c.....cs 18,000
Ger bk Victoria, U K or Cont, pt..... 4,700
It bk Arcangelo, Medit, pt.....cs 25,000

July 6
Nor bk Ghent, Baltic, pt..... 4,000

July 12
Br bk Werner, Java, 32½c.....cs 30,000
Ger sh Senator Iken, Continent, p t..... 7,000

July 14
Dan sh Atalanta, Hamburg, 2s 6d..... 7,000

July 19
Nor bk Karsten, Langaard, Baltic, p t... 4,000

July 20
Ger bk Victoria, Cont or Baltic, p t..... 5,000
Br sh Otago, Havre, 3s 6d.....cde 7,000

July 23
Br bk Harvester, Blaye, 3s 9d..... ...cde 4,200

July 26
Ger bk Libertas, Baltic, p t..... 2,500
Ger bk Laura Maria, Baltic, p t ..... 3,000
Nor bk Embla, Baltic, p t..... 3,000
Nor bk Josephine, Baltic, p t..... 5,500

July 27
Br sh Sapphire, Continent, p t..... ... 7,500
It bk Concezione, Cagliari, f o, 16½c...cs 15,000

July 30
Ger bk Agnes, Hamburg. ..... 5,000
Br bk Scots Bay, Continent .....

Aug 3
Br bk J W Oliver, Stettin or Dantzic, 4s 7½d..... ..... 4,600

Aug. 4.
Ger bk Victoria; U Kor Cout( p t..... . 4,700
Ger sh Favorita, Continent, p t..... 7,200
Ger sh Johann Friedrich, Continent, p t. 7,200
Ger str Ovel Goenne, Hamburg, o's acc. 20,000

Aug 14
Nor bk Albeon, Rouen, 5s..... ...nap 2,500
It bk Ottone, Marseilles, 4s 3d .....cde 3,500

Aug 16
Br str Ardangorm, Rouen, 4s 9d.....cde 7,000

Aug 18
Am bk Joseph Baker, Lisbon, 4s 6d..... 2,200

Aug 20
Am bk Alice, Rouen, 4s 7½d.....cde 3,000
It bk Alfredo, Medit, p t.....cs 30,000

Aug 24
Br str Burnley, Rouen, 5s.....cde 7,000
Ger bk Libertas, Baltic, p t..... ..... 2,500

Aug 25
Port bk Fortuna, Fiume, p t.....cs 20,000

Aug 27
Nor bk P A Munch, Baltic, 4s 9d..... 2,500
Br bk Conductor, Antwerp, 3s 3d..... 7,000
Aus sh The Lord Warden, St Louis du Rhone or Marseilles, 4s.....cde 6,500

Aug 28
It bk Lazarro Bianchi, Medit, p t. .....cs 20,000
It bk Adele, Lisbon, 21c..... .....cs 16,000
It bk Armonia, Java, p t.....cs 30,000
Nor bk Ariadne, Baltic, p t..... 4,500

Aug 29
Br sh Cashmere, London, 4s..... .... 7,500
Nor bk Ole Boe, Bordeaux to Hamburg, 3s 6d and 3s 9d..... 5,000
Nor bk Pomona, Bordeaux to Hamburg, 3s 6d and 3s 9d..... 2,500
Nor bk Embla, Baltic, p t..... 3,000
Am sch Maggie S Hart, French port, p t .....cde 4,000

Aug 30
Br sh Wm Douglas, Dutch port, 4s 3d.... 8,300
Nor bk Lindesnaes, Bremen, p t.....tank 5,300
It bk Conquestore, Medit, p t.....cs 20,000

Aug 31
Nor bk Krageroe, Bremen, 5s 3d.....nap 3,000

Sept 1
It bk San Luigi, Cagliari f o, 25c. .....cs 18,500
Ger str Oevelgonne, Hamburg, o's acc... 25,000

BALTIMORE

July 14
Ger sh Baltimore, Bremen or Hamburg, 2s 6d.... ..... ..... 7,000
Ger sh Agra, Hamburg, 2s 7½d..... 6,000

July 21
Ger sh Stassfurt, Hamburg, pt..... 10,500
Br bk Chas E Lefurgey, Hamburg, 2s 9d. 6,000
Ger bk Ceylon, Cont, pt..... 4,000
Ger bk Louise & Auguste, Hamburg, pt. 7,000

Sept 1
Ger bk Ceylon, Baltic, 4s 9d..... ... 3,600

BOSTON

July 12
Nor bk Nina, Norwegian port, 2s 8d..... 3,000

July 23
Nor bk Triton, Baltic, pt.... .. ..... .. 2,400
Nor bk Grigua, Baltic, pt..... 1,800

Aug 7
Nor bk Elizabeth Ahrens, Baltic, 3s 9d... 2,500

Aug 20
Nor bk Noah, Baltic, 4s 3d..... 2,800

Sept 1
Ger bk Baethaser, Norwegian port, 4s 3d 1,800
Br bg W A Clements, Norwegian port, 4s 3d..... 2,800

## Clearances of Petroleum.

Following are the clearances of petroleum from the ports of New York, Philadelphia, Baltimore, Boston and San Francisco on the dates named. Refined, unless otherwise specified:—

NEW YORK.

Aug 23
Nor str Odin, Christiansand, 2,604 bbls

Aug 28
Am bg Britannia, Bridgetown, 500 cs
Am sch A E Rickerson, Nuevitas, 500 cs
Br bg A Bradshaw, Pt au Prince, 50 cs
Br str Camerata, Ponce, 50 cs
Br str Camerata, Arecibo, 500 cs
Br str Camerata, Arroyo, 200 cs
Br str Camerata, Mayaguez, 350 cs
Br str Camerata, San Juan, 80 cs
Br str Ocean, Bremen, 1,200,000 gls bulk
Br sch Mabel Purdy, St John, N B, 335 bbls
Br str Bermuda, Port Spain, 30 cs
Br str Bermuda, Br West Indies, 300 cs
Br str Bermuda, St Lucia, 110 cs, 1 bbl
Br str Bermuda, Grenada, 90 cs
Br str Bermuda, Barbadoes, 50 cs
Aust bk Errante, Sables de Olonnes, 3,054 bbls cde

Aug 29
Br bk Abram Young, Stettin, 4,443 bbls
Am str Haytian Republic, Cape Hayti, 25 cs
Am str Haytian Republic, St Marc, 20 cs
Am str Haytian Republic, Aux Cayes, 5 bbls 10 cs
Am str Haytian Republic, Jacmel, 25 cs
Am bk Josephine, Rio Janeiro, 16,400 cs
Am bk Brazos, Batavia, 32,000 cs
Am str Maro, Curacao, 10 cs, 1 bbl
Am str Maro, Porto Cabello, 275 cs
Aust bk Agostino C, Cette, 5,546 bbls cde
Br sch Gaspar Embree, Chatham, 135 bbls
Br str J Parker, Halifax, 1,403 bbls, 196 cs
Br str J Parker, Pictou, 515 bbls
Br str Cearense, Pernambuco, 3,500 cs
Br str Cearense, Para, 1,420 cs, 20 bbls
Br str Portia, Halifax, 50 bbls
Br str Portia, St John's, 10 bbls

Aug 30
Am bg Daisy, Bristol, 2,564 bbls
Am bk Havana, Havana, 10,500 cs, 15,000 gls cde
Am bk O Thurlow, Buenos Ayres, 3,000 cs
Ger bk Betty, Stettin, 5,100 bbls
Nor bk Italia, Stettin, 5,317 bbls

Aug 31
Am str St Paul, Sharpness, 11,152 bbls
Br sh Sapphire, Antwerp, 8,191 bbls
Br bg Moss Rose, Sante Fe, 200 cs
Br str Beaconsfield, Antwerp, 8,973 cs
Br bg Nile, Turks Island, 50 cs
Br str Barracouta, St Croix, 25 cs
Br str Barracouta, Guadaleipe, 750 cs
Br str Barracouta, Grenada, 100 cs
Dtch str Edam, Amsterdam, 29 bbls
Span bk Marion,Santa Cruz de la Palma,3,010 cs
Am bg C Purves, Bristol, 3,260 bbls
Am bg Waubun, Capetown, 3,200 bbls
Br sh Constance, Rotterdam, 10,595 bbls
Br str Alvo, Carthagena, 1,051 cs, 1 bbl
Br str Alvo, Savanilla, 751 cs
Ger sh Favorita, Dantzic, 7,255 bbls

Sept 1
Br sch Hattie C Hillsboro, 50 bbls
Br bk Peerless, Pt Natal, 1,200 cs.
Br str Stroma, Georgetown, 1,120 cs.
Ger str Prins, Maurits, Carupano, 1,255 cs
Ger str Prins, Maurits, Georgetown, 200 cs
Ger bk Christel, Hamburg, 5,341 bbls
Ger bk Geo Washington, Hamburg, 7,600 bbls
It bk Fortunato, Marseilles, 2,866 bbls
It bk Lauro, Montevideo, 3,850 cs

SAN FRANCISCO

Aug 17
Anna, Kahului, 20 cs

Aug 15
Granada, Central America, 12 cs
Granada, Mexico, 21 cs

BOSTON

Aug 27
Sch On Time, L'pool, 18 cks

Aug 31
Bk Noah, Rosor f o, 2,527 bbls

Sept 1
Sch Ocean Star, St Johns, 350 bbls, 100 hf bbls, 50 cs

PHILADELPHIA

Aug 25
Ger bk Konig Carl, Bostock, 2,567 bbls

Aug 27
Am bk Neptune, Havre, 2,690 bbls cde
It bk Battaglia, Caglian f o, 26,611 cs

Aug 28
Nor bk Raguhild, Helsingborg, 3,160 bbls

Aug 30
Nor bk Orion, Stettin, 6,133 bbls
Nor bk Harvester, Blaye, 4,199 bbls cde

Aug 31
Br bk Kedron, Londen. 7,483 bbls
Br bk Commercio, Lisbon, 1,210 bbls, 8,408 cs

BALTIMORE

Aug 24
Br bk Katie Stuart, Ghent, 113,357 gls

(For Imports of Empty Petroleum Barrels, see page 40.)

## CONTENTS.


EDITORIALS:—
Tariff Prospects ..... 5
Close of the Cotton Oil Season. ..... 5
The Advance in Shellac.... ..... ..... 5
Cottonseed Lard..... 5
A Sequel to the Scotch Oats Essence Fraud 5
Cloves and Clove Oil..... 6
The Car-load Lot Question..... 6
No Favors to Smugglers..... 6
Congressional Bombast..... 6
TRADE ITEMS ..... 7
PETROLEUM NOTES..... 7
CHICAGO LETTER..... 7
MISCELLANEOUS:—
The Wholesale Druggists' Convention..... 8
Cottonseed Meal as a Cattle Food..... 8
An Addition to the Cotton Oil Industry... 8
The Carload Lot Cases Before the Inter-State Commerce Commission..... 8
The Opium Smugglers.... ..... ..... 8
The National Paint and Oil Club..... 8
Lard in England..... 8
The Petroleum Situation..... 9
How Oil Pockets are Made ..... 9
The St. Mary's Oil Field..... 9
Lard Measures in Congress... ..... 9
Transfers of Valuable Oil Property..... 9
The Bakerstown Oil Situation.....
The Rise and Power of Caffeine.....
Progress of the Use of Petroleum ..... 10
Oil for Coal in Russia. . .....0
Oil Carrying Steamers.....10
Window Glass Factories to Reopen Oct. 8..17
Naval Stores Review.....27
Wool Oil.....27
Grindelia Robusta and Grindelia Squarrosa38
The Adulteration of Condiments..... ....39
Russian Kerosene in Africa and Spain.....39
The Nitrate Deposits of South America . 39
Detection of Iron in Oil..... .....39
Coal Tar as Fuel..... .....39
Canada Oil Report.....39
English Petroleum Markets.....40
More about the Peppermint Crop .....46
Coca Grown in India..... 48
Detecting Adulterations in Olive Oil. .....51
Drug Trade in New Orleans..... .....51
Extensive Culture of High Quality Cinchona in Japan..... 51
Detection of Ceresin in Beeswax,.....51
The Ammonia Soda Process.....55
German Chemical Industry.....56
Drying Oils ..... .....57
Sizing with Wax, Stearine, Fat and Paraffine.....58
THE MARKETS—
Paints..... 15 to 20
Oils ..... 25 to 27
Naval Stores..... .....27
Petroleum.... ..... 31 to 33
Drugs..... .....45 to 48
Chemicals..... 53 to 55
Dyes..... 58
PRICES CURRENT:—
Paints..... 49
Oils..... 49
Naval Stores..... 49
Drugs..... 49 & 50
Chemicals..... 50
Dyes..... 50

L. A. SALOMON & BRO.
MANUFACTURERS OF
EXTRA REFINED WOOD ALCOHOL,
PURE METHYL — INODORINE.
LOUIS A. SALOMON EST. 1867 NEW YORK AND
PERFECT SUBSTITUTES FOR GRAIN ALCOHOL FOR ALL MECHANICAL PURPOSES.
216 PEARL ST. NEW YORK.

ESTABLISHED 1827.
B. A. FAHNESTOCK'S
VERMIFUGE
FOR HOME AND EXPORT TRADE.
J. E. SCHWARTZ & CO., PITTSBURGH, PA
Successors to B. A. Fahnestock's Son & Co.,
Sole Proprietors.
Observe particularly that the initials are B.A.

New York Tartar Co.
63 WILLIAM ST., NEW YORK.
Refiners of
99% CREAM of TARTAR
Manufacturers of
TARTARIC ACID.
In view of the large amount of adulterations and substitutes sold as Cream of Tartar, we caution the public against such brands, and recommend buyers to be sure they obtain the Best Grape Cream of Tartar, 99 per cent. pure.

A. KLIPSTEIN,
New York, Boston, Philadelphia.
American Agent for
Soluble Antimony
(47 per cent. Oxide of Antimony.)
Replaces Perfectly Tartar Emetic and all Other Forms of Antimony in
DYEING and PRINTING.

M H F.V.A.
ARE THE BEST KNOWN BRANDS OF
:VENETIAN · REDS:
INDIAN REDS, IRON OXIDES,
IMPORTED BY
J. W. BINNEY, 227 PEARL ST., NEW YORK,
SOLE AGENT.
Quotations on Dock New York, Philadelphia, Boston, New Orleans and Baltimore.

## IMPORTS, EXPORTS, DOMESTIC RECEIPTS, Etc.

### IMPORTS ENTERED AT NEW YORK FOR CONSUMPTION.

DURING THE WEEK ENDING SEPT. 1, 1888.

ACID—10 cks, 1,000lb, W Pickhardt & K, Edam, A'dam
1 cs, Eimer & Amend, Gellert, Hamburg
1 cs, Schering & G, Gellert, Hamburg
CARBONIC—250 pgs, 5,500lb, E Brunier, Edam, Rotterdam
20 cs, Schering & G, Gellert, Hamburg
PICRIC—20 cs, 1,120lb, Lutz & Movius, Celtic, L'pool
PYRO—5 cs, Schering & G, Gellert, Hamburg
SALICYLIC—10 pgs, 1,000lb, Schulze-Berge & K, Rhynland Antwerp
5 cs, Schering & G, Gellert, Hamburg
ALIZARINE—1 ck, 220lb, Wheelwright, E & Co, La Champagne, Havre
25 cks, 10,397lb, Pickhardt & K, Edam, A'dam
35 pgs, 8,485lb, Lutz & Movius, Amsterdam, A'dam
20 pgs, 8,380, Lutz & Movius, Suevia, Hamburg
1 cs, 20lb, Lutz & Movius, Trave, Bremen
ALBUMEN—3 cs, 928lb, A Klipstein, La Bretagne, Havre
35 cs, Pickhardt & K, Edam, A'dam
10 cks, 4,126lb, Schulze-Berge & K, The Queen, L'pool
ALUM—100 bbls, 45,188lb, J Lee & Co, C of Chester, L'pool
ALUMINA SULPH—386 cks, 116,800lb, E H Watson, Edam, A'dam
ALOES—10 cs, 2,504lb, R Hillier's Son Co, P Monarch, London
15 cs, E N & J B Lawrence Jr, P Monarch, London
AMMONIA CARB—50 cks, 29,554lb, J L & D S Riker, Holland, London
21 cks, 11,662lb, Schulze-Berge & K, Nevada, L'pool
MURI—30 cks, 31,618lb, J L & D S Riker, Nevada, L'pool
ANILINE COLORS—10 cks, W Pickhardt & K, Trave, Bremen
9 pgs, Sykes & Street, La Bretagne, Havre
55 pgs, W Pickhardt & K, Edam, A'dam
1 cs, 50lb, J Campbell & Co, Wisconsin, L'pool
5 cks, 499lb, Schulze-Berge & K, Elbe, Bremen
8 cks, C Georgi, Elbe, Bremen
1 pgs, W Pickharkt & K, Elbe, Bremen
3 pgs, 200lb, Lutz & Movius, Elbe, Bremen
3 cks, W J Matheson & Co, Nevada, Liverpool
1 keg, 10lb, Lutz & Movius, Trave, Bremen
26 pgs, 6,200lb, E Schlbach & Co, Rhynland, Antwerp
5 cs, F Bredt & Co, Rhynland, Antwerp
46 pgs, 6,222lb, Lutz & Movius, Suevia, Hamburg
ANTIMONY—35 cks, 23,520lb, American Metal Co, P Monarch, London
ARCHIL—10 cks, 6,351lb, W A Ross & Bro, Nevada, Liverpool
ARSENIC—285 bbls, 112,338lb, Sondheim, A & Co, J City, Swansea
294 bbls, 112,153lb, Heller & Merz, J City, Swansea
BALSAM—3 cs, 343lb, F Probst & Co, Colorado, Aspinwall
BLEACH—60 cks 54,238lb, J L & D S Riker, Nevada, Liverpool
BORAX—119 bgs, 11,087lb, H J Baker & Bro, The Queen, L'pool
BRISTLES—3 pgs, 662lb, J W Mills & Co, La Bretagne, Havre
17 pgs, 3,375lb, F W Von Stade, La Bretagne, Havre
4 pgs, 882lb, H Kroehl, Etruria, Liverpool
3 cks, 979lb, Lewissohn Bros, Trave, Bremen
12 pgs, 1,212lb, Lewissohn & Co, Etruria, Liverpool
5 cks, 2,334lb, H Conheim, Holland, London
4 cs, 382lb, H Kroehl, P Monarch, London
207 J R Katz, Elbe, Bremen
BRONZE POWDER—8 cs, L Rosenfeld, Trave, Bremen
1 cs, W & H Erdtman, Trave, Bremen
2 cs, 500lb, Fuchs & Lang, Gellert, Hamburg
3 cs, 1,000lb, J Marsching & Co, Gellert, Hamburg
12 cs, Abegg, D & Co, Elbe, Bremen
13 cs, 7,100lb, J Marsching & Co, Elbe, Bremen
1 cs, Sondheim, A & Co, Elbe, Bremen
17 cs, Gerstendorfer Bros, Elbe, Bremen
7 cs, A Sartorius & Co, Elbe, Bremen
CANARY SEED—282 bgs, 41,168lb, W A Brown & Co, C of Chester, L'pool
CARDAMOMS—3 cs, 385lb, Stallman & F, Holland, London
CARNAUBA WAX—28 bgs, 2,224lb, F G Strohmeyer & Co, Gellert, Hamburg
CASSIA—570 bls, 39,102lb, J R Townsend & Co, O Baxter, Padang
CHIPS—650 bls, 35,644lb, J R Townsend & Co, O Baxter, Padang
CACHOU DE LAVAL—15 cs, Sykes & Street, La Bretagne, Havre
CASTOR SEED—430 bgs, 1,410 bush, J Lee & Co, P Monarch, London
CEMENT—750 cks, Marcial & Co, P Monarch, London
2,500 cks, E Thiele, Avonmore, Antwerp
1,500 cks, H Fleming, Holland, London
1,000 cks, Sinclair & B, Holland, London
3,024 bbls, Sinclair & B, Belt, London
500 cks, Sinclair & B, P Monarch, London
500 cks, C J Stephens, P Monarch, London
500 bbls, Sinclair & B, Gellert, Hamburg
1,120 bbls, Gabriel & S, Gellert, Hamburg
500 cks, E Thiele, Rhynland, Antwerp
1,500 cks, E Thiele, L Smith, Antwerp
CHAMOIS—1 cs, Park & Tilford, La Bretagne, Havre
4 cs, McKesson & R, Otranto, Hull
7 cs, T L Lutkins, Britannic, Liverpool
3 cs, T L Lutkins, La Bretagne, Havre
CHALK—10 cks, 2,240lb, Tyler & Finch, Holland, London
CHAMOMILES—17 bbls, 3,372lb, Eimer & Amend, Gellert, Hamburg
CHEMICALS—6 cs, Schering & Glatz, Gellert, Hamburg
10 cs, McKesson & K, Taormina, Hamburg
1 cs, Dr E R Squibb, Gellert, Hamburg
20 cs, 10,000 ozs, Lutz & Movius, Trave, Bremen
CHREMNITZ WHITE—3 cks, 3,029lb, Lutz & Movius, Amsterdam, A'dam
CINCHONA BARK—28 bls, 8,407 lb, Wattson & Farr, Holland, London
CIVIT—1 cs, 150 ozs, G Lueders, La Champagne, Havre
CLOVES—40 bls, 4,996lb, J W Phyfe & Co, P Monarch, London
18 bls, G S Adrian & Co, P Monarch, London
50 bls, 5,530 lb, Thompson & Taylor Spice Co, P Monarch, London
20 cs, 3,795lb, Packard & J, Holland, London
10 cs, E R Durkee & Co, Holland, London
16 cs, 3,130lb, Groat & Kissock, P Monarch, London
STEMS—38 bgs, 4,133lb, J R Townsend & Co, Holland, L'don
COLORS—3 cs, J Marsching & Co, La Bretagne, Havre
13 cks, W Pickhardt & K, Edam, Amsterdam
40 cks, 22,000lb, Gabriel & S, Taormina, Hamburg
4 cs, Hensel, B & L, Elbe, Bremen
1 cs, Foreign Express Co, Gellert, Hamburg
COLOMBO ROOT—20 bgs, 2,313 lb, R Brueckner & Co, P Monarch, London
CORKS—47 bgs, J Llado, Holland, London
CUBEB DUST—2 bgs, A A Stilwell, Holland, London
STEMS—20 bgs, A A Stilwell, Holland, London
CUDBEAR—5 cks, 4,040lb, W J Matheson & Co, Holland, London
1 ck, 740lb, R Holliday's Sons, Nevada, L'pool
CUTCH—1,000 bgs, 136,010lb, Carleton & M, G Skolfield, Calcutta
1,000 bgs, Howe, Balch & Tay, G Skolfield, Calcutta
1,000 bgs, 435 bxs, G B Morewood & Co, G Skolfield, Calcutta
350 bgs, O S Janney & Co, G Skolfield, Calcutta
DIVI DIVI—134 bgs, 11,670lb, Foulke & Co, Valencia, Curacao
DRUGS—48 pgs, Eimer & Amend, Gellert, Hamburg
9 cs, 1,155lb, Stallman & F, Otranto, Hull
DUTCH METAL—1 cs, J Marsching & Co, Elbe, Bremen
DYEWOOD EXT—2 pgs, 96lb, J C Bloomfield & Co, Nevada, Liverpool
ERGOT—16 bgs, 2,297lb, S F Gibbons, Holland, London
FISH SOUNDS—4 bls, 1,100lb, H Witte, Edam, Amsterdam
FLOWERS—3 bbls, 691lb, R Brueckner & Co, Otranto, Hull
FULLERS EARTH—40 tons, Hammill & G, P Monarch, London
FUSTIC EXT—25 cks, Beach & Co, Nevada, Liverpool
GAMBIER—311 pgs, 77,728lb, S F Gibbons, P Monarch, London
GALLS—50 bgs, 15087lb, C Von Pustau & Co, Nevada, L'pool
EXT—5 cks, 2,521lb, P H Karcher, Belgenland, Antwerp
GELATINE—24 cs, 4,103lb, L W Morris & Son, Edam, A'dam
20 cs, 3,151lb, Lutz & Movius, Suevia, Hamburg
GINGER—25 bgs, 2,025lb, J Aparaco & Co, Colorado, Aspinwall
131 bbls, 18,368lb, Fischer & Ewald, P Monarch, London
GLASS CATHEDRAL—17 cs, 9,094lb, J Fitzpatrick & Co, Circassia, Glasgow
11 cs, 5,797lb, Vanhorne, G & Co, Circassia, Glasgow
MIRROR—16 cs, 14,880 ft, Vanhorne, G & Co, Edam, R'dam
8 cs, 4,586 ft, A Arnstein & Co, Edam, R'dam
23 cs, 11,895 ft, S Bache & Co, Edam, A'dam
36 cs, 17,162 ft, Bendit, D & Co, Edam, A'dam
5 cs, 1,263 ft, A Forster & Co, Taormina, Hamburg
2 cs, 371 ft, J Zahn, Rhynland, Antwerp
44 cs, 16,780 ft, S Bache & Co, Rhynland, Antwerp
PLATE—34 cs, 17,402lb, S Bache & Co, Circassia, Glasgow
43 cs, 17,367lb, J Fitzpatrick & Co, The Queen, L'pool
6 cs, 1,711 ft, H H Cahn, Rhynland, Antwerp
8 cs, 1,346 ft, J Kahn, Rhynland, Antwerp
COLORED—47 cs, J Kahn, Rhynland, Antwerp
WINDOW—105 cs, 23,973lb, Heroy & M, Nevada, L'pool
993 cs, 58,870lb, Holbrook Bros, Rhynland, Antwerp
882 pgs, 61,180lb, T W Morris & Co, Rhynland, Antwerp
687 pgs, 34,710lb, Vanhorne, G & Co, Rhynland, Antw'p
2,865 pgs, 68,530lb, S Bache & Co, Rhynland, Antwerp
GLUE—35 cks, 11,200lb, A K Gardiner & Bro, J City, Bristol
GLYCERINE CRUDE—156 cks, 76,530lb, Marx & Rawolle, La Bretagne, Havre
GOLD SIZE—5 pgs, Pomeroy & F, Holland, London
GREASE—12 cks, 4,624lb, L R Welles & Co, La Bretagne, Havre
60 bbls, A L Knight, Nevada, Liverpool
GUINEA GRAINS—6 bgs, G S Adrian & Co, P Monarch, L'don
GUM ARABIC—61 cs, 16,349lb, Thurston & B, P Monarch, L'don
57 cs, 14,867lb, Spencer & Co, Holland, London
ANIMI—20 cs, 4,344lb, L C Gillespie, P Monarch, London
KAURI—151 cs, 35,938lb, Walker Gum Co, M Henning, Auckland
1,197 cs, 240,956lb, T N Bolles, M Henning, Auckland
645 cs, 130,35?lb, E Hill's Son & Co, M Henning, A'kland
831 cs, 166,200lb, Arnold C & Co, M Henning, Auckland
906 cs, 240,800lb, Knudson P & Co, M Henning, Auckland
43 cs, 9,890lb, C T Raynolds & Co, M Henning, Auckland
200 cs, 73,696lb, C Loewenthal & Co, M Henning, A'kl'd
140 cs, 31,360lb, R W Forbes & Co, M Henning, Auckland
359 cs, 14,696lb, E Calman & Co, M Henning, Auckland
TRAG—25 cs, 4,263 lb, T K Cummins & Co, France, London
HERBS—91 bls, R Brueckner & Co, Otranto, Hull
60 bls, 10,998lb, M Koenigsheim, Otranto, Hull
INSECT POWDER—1 cs, B Nathan, La Bretagne, Havre

1 kg, 112℔, F J Macnaughtan, P Monarch, London
INDIGO—52 cs, Howe, Balch & Tay, G Skolfield, Calcutta
7 cs, 1,591℔, R Holliday's Sons, Nevada, L'pool
EXT—22 cks, 14,642℔, Pickhardt & K, Holland, London
10 cks, 9,508℔, Banning, B & Co, Nevada, L'pool
10 cks, 11,654℔, J Campbell & Co, The Queen, L'pool
IRON OXIDE—50 bbls, 34,679℔, E S Morris, J City, Bristol
LEECHES—4 cs, F Paturel & Co, La Bretagne, Havre
4 cs, H Wette, La Bretagne, Havre
LEMON JUICE—10 cks, F Bredt & Co, La Bretagne, Havre
LICORICE ROOT—2,563 bls, 861,266℔, McAndrews & Forbes, Maria, Smyrna
3,180 bls, 449,680℔, Zuricalday & A, P Giacomo, Alicante
PASTE—25 cs, 5,647℔, D Cleveland, Olympia, Naples
LIME ARSEN—124 pgs, E S Morris, P Monarch, London
LOGWOOD—42½ tons, Thebaud Bros, A Pallas, Laguna
893℔, L Brandeis & Co, C of Alexandria, Campeache
ROOTS—435 tons, Leaycraft & Co, Emma, Jamaica
LYCOPODIUM—6 cs, 1,512℔, F J Macnaughtan, P Monarch, London
MACE—50 cs, 6,654℔, J R Townsend & Co, O Baxter, Padang
7 cs, 1,673℔, Groat & Kissock, P Monarch, London
PEELS—4 pgs, 543℔, C E Howe, Edam, Amsterdam
MADDER—17 cks, 22,763℔, C C Abel & Co, Edam, Rotterdam
5 cks, 6,415℔, Packard & J, Edam, Rotterdam
MANURE SALT—500 bgs, H J Baker & Bro, Taormina, H'burg
MUSK—1 cs, 203 ozs, Lanman & Kemp, P Monarch, London
MUSTARD SEED—317 bgs, 29,562℔, W A Brown & Co, Nevada. Liverpool
NUTMEGS—20 cs, 2,451℔, W A Brown & Co, Edam, A'dam
17 cs, 2,796℔, L German, Edam, Amsterdam
40 cs, 8,822℔, C E Howe, Edam, Amsterdam
10 cs, 667℔, Packard & James, Holland, London
10 cs, 800℔, E R Durkee & Co, Holland, London
50 cs, 3,335℔, Bidwell & French, Holland, London
OCHER—60 cks, 36,997℔, G W Sheldon & Co, C Lafite, Bordeaux
3 cks, 600℔, Pomeroy & F, Holland, London
38 cks, 21,186℔, A Keppelmann, P Monarch, London
50 cks, 30,564℔, G W Sheldon & Co, P Monarch, London
OIL CODLIVER—15 bbls, 375 gls, J Zeller, Martello, Hull
ALMOND—2,000℔, G Lueders, La Gascogne, Havre
ESSENTIAL—5 cs, 83℔, A A Stilwell, Holland, London
FUSIL—25 cks, 29,518℔, Richards & Co, Chilian, Hamburg
JUNIPER—160℔, G Lueders, La Gascogne, Havre
LAVENDER—350℔, G Lueders, La Gascogne, Havre
SPIKE—560℔, G Lueders, La Gascogne, Havre
NEROLI—5℔, G Lueders, La Gascogne, Havre
PIMENTO—1 cs, 25℔, MbKesson & R, P Monarch, London
ORANGE LEAD—25 cks, 18,007℔, A Keppelman, Edam, R'dam
PEEL—2 bls, J S Nixon, M Christina, Malaga
PEPPER—450 bgs, 55,744℔, E R Durkee & Co, Holland, London
150 bgs, 16,829℔, J R Townsend & Co, Holland, London
PERFUME—1 cs, E Fougera & Co, C Lafite, Bordeaux
1 cs, 5 gls, Calhoun R & Co, La Bretagne, Havre
1 cs, Stern Bros, Trave. Bremen
22 cs, 217 gls, Park & Tilford, Edam, Rotterdam
3 cs, Park & Tilford, La Bretagne, Havre
1 cs, 3 gls, R F Downing & Co, P Monarch, London
PITCH—120 bbls, M Taylor & Son, S of Indiana, Glasgow
POTASH CARB—30 cks, 31,442℔, W Pickhardt & K, Edam. A'dam
CHLO—30 cks, 16800℔, J L & D S Riker, Otranto, Hull
HYDRATE—25 cks, 27,009 ℔, E Hill's Son & Co, Rhynland. Antwerp
PRUSS—37 cks, 21,267 ℔, Roessler & H, Rhynland, Antw'p
POMADE—6 cs, 600℔, G Lueders, La Gascogne, Havre
QUININE—5 cs, 5,000 ozs, W A Brown & Co, P Monarch, London
30 cs, 12,000 ozs, L Engelhorn, Elbe, Bremen
RAPESEED—2 bgs, 200℔, B Ruhr, Elbe, Bremen
RHATANIA ROOT—16 bls, 1,612℔, J Clay, Holland, London
ROOTS—4 bgs, R Brueckner & Co, Otranto, Hulll
SAGO—105 bgs, Ready Food Co, Rhynland, Antwerp
150 bgs, 33,250℔, Levy & Levis, Rhynland, Antwerp
SHELLAC—150 cs, N Y Shellac Co, Holland, London
6 cs, C Neues, Denmark, London
100 cs, Knudson, P & Co, G Skolfield, Calcutta
SOAP CASTILE—20 cs, 2,343℔, W Heuermann, Otranto, Hull
SODA ARSEN—5 cks, 6,618℔, Baldwin Bros & Co, C of Chester, Liverpool
ASH—35 cks, 59,300℔, C J Holt, C of Chester, L'pool
68 cks, 112,816℔, J L & D S Riker, Nevada, L'pool
44 cks, 115,820℔, Erie Dispatch, S of Ind, Glasgow
74 cks, 112,014℔, J L & D S Riker, The Queen, L'pool
130 cks, 233,141℔, Wing & Evans. C of Chicago, L'pool
NITRATE—9,927 bgs, 3,360,000℔, W R Grace & Co, E Kidder, Pisagua
SPONGE—30 cs, A Isaacs & Co, Holland, London
234 cs, Lasker & B, Holland, London
STEARINE—9 cks, 10,243 ℔, J E Schweizer & Co, P Monarch, London
144 cks, J E Schweizer & Co, Otranto, Hull
ST JOHNS BREAD—200 bgs, 44,092℔, R F Downing & Co, Otranto, Hull
SUMAC EXT—20 bbls, Neumark & Gross, Servia, Liverpool
TALLOW, BONE—5 cks, 4,582 ℔, Baldwin Bros & Co, City of Chester, Liverpool
SULPHUR LAC—5 cks, 1,738 ℔, McKesson & R, P Monarch, London
STRONTIA NITRATE—29 cks, 19,155 ℔, F J Macnaughtan, P Monarch, London
OXALATE—1 kg, 89 ℔, F J Macnaughtan, P Monarch, London
TURKEY RED—10 cks, 13,332 ℔, G A & E Meyer, Otranto, Hull
ULTRAMARINE—20 cs, 11,000 ℔, W Pickhardt & K, Edam, Amsterdam
10 cs, 4,000℔, H C Hulbert & Co, Edam, Rotterdam
4 cks, 2,240 ℔, A B Ansbacher & Co, Taormina, H'burg
2 cks, 484℔, W Pickhardt & K, Edam, Amsterdam
VANILLA BEANS—5 cs, 666 ℔, L Bernard & Co, La Bretagne, Havre
1 cs, 190℔, Struller & J, C of Alexandria, Vera Cruz
VARNISH—1 cs, C B Richards & Co, C of Chester, L'pool
54 pgs, Pomeroy & F, Holland, London
VENETIAN RED—300 cks G W Sheldon & Co, Otranto, Hull

## WAREHOUSED.

ACID BORACIC—24 cks, 25,970℔, J Marsching & Co, Olympia, Leghorn
ALCOHOL—160 bbls, 7,365 gls, G W Kidd & Co, Taormina, Hamburg
ANILINE COLORS—58 pgs, E Sehlbach & Co, Belgenland, Antwerp
12 pgs, Sykes & Street, La Bretagne, Havre
12 cks, 8,020℔, J Campbell & Co, Nevada, Liverpool
5 pgs, 500℔, Schulze-Berge & K, Trave, Bremen
BRISTLES—13 cs, 1,129℔, L Rosenfeld, Holland, London
18 cs, 1,566℔, Lewissohn & Co, Etruria, Liverpool
11 cs, 2,205℔, L J Glaenzer, P Monarch, London
CACAO BUTTER—28 bls, 4,658℔, H Martin, Edam, A'dam
CACHOU DE LAVAL—5 cs, Sykes & Street, La Bretagne, Havre
CORKS—146 bls, F Llado & Co, C Lafite, Bordeaux
65 bls, A Daussa & Co, C Lafite, Bordeaux
DYEWOOD EXT—75 cks, L J Levinstein & Co, C Lafite, Bordeaux
3 cks, Sykes & Street, Otranto, Hull
GELATINE—10 cs, 1,000℔, A Hodge & Co, P Monarch, London
LICORICE PASTE—25 cs, 5,500℔, Zuricalday & A, C Lafite, Bordeaux
50 cs, 10,761℔, Stallman & F, Olympia, Naples
MATCHES—50 cs, C Rosenstein & Co, Otranto, Hall
OIL CASTOR—90 cs, 1,980 gls, Hewlett & Torrence, G Skolfield, Calcutta
200 cs, 4,100 gls, Knudson P & Co, G Skolfield, Calcutta
ESS—4 cs, Dodge & O, Trave, Bremen
HARLEM—25 cs, Stallman & F, Edam, Amsterdam
OPIUM—5 cs, 790℔, W H Schieffelin & Co, Britannic, L'pool
10 cs, 1,665℔, Paddock & F, Britannic, L'pool
SPONGE—224 bls, A Isaacs & Co, Cienfuegos, Nassau
204 bls, Laskar & B, Cienfuegos, Nassau
59 bls, Mansell & B, Cienfuegos, Nassau
SUMAC EXT—25 cks, 12,830℔, Sykes & Street, Otranto, Hull
VARNISH—3 cs, C B Richards & Co, C of Chester, L'pool
VIOLET EXT—2 cs, 11 gls, W Rudkin's Sons, La Bretagne, Havre

## IMPORTS AT BOSTON.

Week ending Sept. 1, 1888.

ACID PICRIC—5 cs, J D Lewis, Bostonian, Liverpool
ALIZARINE—2 cks, Beach & Co, Samaria, Liverpool
ANILINE SALT—30 cks, Bostonian, Liverpool
ARSENIC—76 cks, E & F King & Co, Br Queen, London
BLEACH—42 cks, E & F King & Co, Roman, Liverpool
133 cks, order, Roman, Liverpool
60 cks, J L & D S Riker, Samaria, Liverpool
107 cks, order, Samaria, Liverpool
1,006 cks, order, Bostonian, Liverpool
37 cks, E & F King & Co, Bostonian, Liverpool
85 cks, Wing & Evans, Bostonian, Liverpool
123 cks, J L & D S Riker, Bostonian, Liverpool
CEMENT—1,000 cks, Waldo Bros, Br Queen, London
790 cks, order, Br Queen, London
CHAMOIS—6 cs, J A & W Bird & Co, Samaria, Liverpool
CHINA CLAY—400 cks, Roman, Liverpool
CORKWOOD—55 bdls, Bostonian, Liverpool
DYEWOOD EXTRACT—25 bbls, Roman, Liverpool
10 cks, Beach & Co, Samaria, Liverpool
GALLS—32 bgs, J D Lewis, Bostonian, Liverpool
GAMBIER—309 bls, Br Queen, London
GLASS PLATE—24 cs, order, De Ruyter, Antwerp
8 cs, Lambert Bros, De Ruyter, Antwerp
12 cs, R Sherburne & Co, Bostonian, Liverpool
8 cs, Stone & Downer, Bostonian, Liverpool
23 cs, Lambert Bros, Bostonian, Liverpool
6 cs, order, Bostonian, Liverpool
WINDOW—12,273 pgs, order, De Ruyter, Antwerp
580 cs, H F Farnham & Co, De Ruyter, Antwerp
6 cs, Hills, Turner & Co, Bostonian, Liverpool
GOLD THREAD—2 bbls, G S Cheney & Co, Yarmouth, Yarm'h
GREASE—30 bbls, Br Queen, London
HAKE SOUNDS—1 bbl, F L Clements & Co, Yarmouth, Y'm'th
1 dm, T J Jones & Co, Worcester, Halifax
LOGWOOD—550,000℔, Green, Knoebel & Co, Orlando, Pt au Prince
MACE—51 cs, Br Queen, London
OIL COD—18 bbls, G H Leonard & Co, Yarmouth, Yarmouth
PAINT—20 kgs, Br Queen, London
POTASH CHLO—25 kgs, Roman, Liverpool
SHELLAC—5 cs, Merrill D & Co, Br Queen, London
SOAP STOCK—35 bbls, Roman, Liverpool
SODA ASH—234 cks, Roman, Liverpool
81 cks, Morey & Co, Bostonian, Liverpool
CAUSTIC—340 dms, Roman, Liverpool
250 dms, E & F King & Co, Bostonian, Liverpool
NITRATE—8,991 bgs, Hemenway & B, J G Pendelton Pisagua
SAL—200 kgs, 140 bbls, Roman, Liverpool
149 bbls, Samaria, Liverpool
TERRA ALUM—313 tons. Bostonian, Liverpool
VARNISH—3 cs, Wadsworth, Howland & Co, B Queen, London
VERMILION—1 csk, B Queen, Wadsworth, H & Co, London
YELLOW BERRIES—10 bgs, Bostonian, Liverpool

## IMPORTS AT PHILADELPHIA.

Week ending Aug. 31, 1888.

BARK—23 bls, Bengore Head, Liverpool
BLEACH—208 cks, Fergusson Bros, Bengore Head, Liverpool
87 cks, Wing & Evans, Bengore Head, Liverpool
BRIMSTONE—700 tons, San Luigi, Licata
700 tons, Conquistatore, Catania
580 tons C Lennig & Co, Adele, Catania
2,000 tons, Amaryllis, Gigenti
BONES—465 tons, Pomona, Buenos Ayres
CHEMICAL SALT—51 cks, C Lennig & Co, Bengore Head, Liverpool
CHINA CLAY—550 tons, Libertas, Fowey
CLIFFSTONE—600 tons, Embla, Hull
CEMENT—2,800 bbls, Ariadne, Stettin
1,000 cks, French, Richards & Co, W Douglas, London
7,499 cks, order, W Douglas, London
LITHARGE—20 cks, J Lucas & Co, Bengore Head, Liverpool
IRON OXIDE—32 cks, Harrison Bros & Co, Bengore Head, Liverpool
LEMON JUICE—50 pps, Amaryllis, Messina
LOGWOOD—9 tons, J McLaggin, Demerara
MANGANESE—280 tons, C E Colcord, St John, N B
OIL ESSENTIAL—5 cs, Amaryllis, Messina
WHALE—99 cks, L Bianche, Capetown
SODA ASH—142 cks, Bengore Head, Liverpool
204 cks, 362,183℔, Wing & Evans, Lord Clive, Liverpool
CAUSTIC—50 dms, O G Hempstead & Son, Bengore Head, Liverpool
SAL—374 cks, J I Keefe, Bengore Head, Liverpool
200 cks, 89,600℔, Wing & Evans, Lord Clive, Liverpool

## IMPORTS AT NEW ORLEANS.

Week ending August 31, 1888.

ARGOLS—27 cks, Dupuy de Lome, Havre
CEMENT—1,671 bbls, Dupuy de Lome. Antwerp
GLASS WINDOW—2,796 cs, Dupuy de Lome, Antwerp
GUM CHICLE—14 bgs, G W Kelly, Tuxpan
SOAP—50 cs, Dupuy de Lome, Havre
WASH BLUE—100 cs, Dupuy de Lome, Havre
VANILLA BEANS—2 cs, G W Kelly, Tuxpan

## IMPORTS AT BALTIMORE.

Week ending Aug. 31, 1888.

BLEACH—121 cks, Barrowmore, Liverpool
BRISTLES—17 cs, Barrowmore, Liverpool
BRIMSTONE—740 tons, Zeffiro, Girgenti
GUANO—281 tons, S Bishop, Orchilla
GLUE—2 cks, J J Thomsen, Barrowmore, Liverpool
KAINIT—1,560 tons, J Bouday, Jr, & Co, Eglantine, Hamburg
IRON OXIDE—35 cks, Barrowmore, Liverpool
INDIAN RED—30 cks, Barrowmore, Liverpool
ROTTENSTONE—1 ck, Barrowmore, Liverpool
SALT CAKE—521 cks, Barrowmore, Liverpool
SODA ASH—730 cks, Barrowmore, Liverpool
VENETIAN RED—280 cks, Barrowmore, Liverpool

## IMPORTS AT CHARLESTON.

BRIMSTONE—475 tons, Sirena, Licata
700 tons, San Luigi, Licata

## IMPORTS AT CHICAGO.

Week ending Sept. 1, 1888.

BRUSHES—4 cs, Gerts. Lombard & Co
CHEMICALS—7 cs, E H Sargent & Co
8 cs, W H Richards
GLASS—18 cs, First National Bank
PLATE—3 cs, Bradley & Co
WINDOW—46 cs, J H Rice & Co
GUM—1 cs, Hibbarb, Spencer & Bartlett
15 bbls, Potwin & Morgan
PHOSPHATES GROUND—1 car, N W Fertilizing Co
SEEDS—2 cs, K G Deckler

MANUFACTURERS W. & R. Ross BELFAST IRELAND
Ross's Royal BELFAST GINGER ALE
Ginger Ale.
IMPORTING AGTS W. & R. Ross NEW YORK

Aniline Oil.
BENZOLE, TOLUOLE, XYLOLE, NITROBENZOL, NITROTOLUOLE, NITROXYLOLE, BINITROBENZOLE, BINITROTOLUOLE, NITRIC ACID.

J. W. Weiler & Co.,
Oldest Manufactory of Aniline.
Ehrenfeld, near Cologne.
Established 1861.
All Products in Purest, Unsurpassed Qualities.
Sole Agents in America. SCHULZE-BERGE & KOECHL, 75 Pine Street, New York.

Aniline Salt.
ANILINE, TOLUIDINE, XYLIDINE, NAPHTYLAMINE, DIPHENYLAMINE, METHYL AND ETHYL DIPHENYLAMINE, SULPHURIC ACID.

ABRAM De RONDE & CO.
Dyewood Extracts, Archil, Indigo, Sumac, Bark, Chestnut, Hemlock,
Cudbear, Sumac American, Sumac Sicily, Gambier, Cutch, Divi Divi, Nut Galls
Importers and Manufacturers
Chemicals AND Dyestuffs.
12 Cedar Street, New York.
Tin Crystals, Stannate Soda, Muriate Tin, Oxy Mur. Tin, Oxy Mur. Antimony, Antimony Salts, Nitrate Copper,
Nitrate Iron, Iron Liquor, Prussiate Potash, Red " " Yel Oxalic Acid, Glauber Salt, Fullers Earth.

## WITHDRAWALS FROM BOND.

Week ending Sept. 1, 1888.

| | |
|---|---|
| Acid boracic, cks | 5 |
| Aniline colors, pgs | 226 |
| Antimony oxalate, bbls | 7 |
| Bay rum, gls | 922 |
| Bay water, gls | 43 |
| Bronze powder, cs | 3 |
| Bristles, lbs | 14,578 |
| Cocoa butter, bls | 12 |
| Cement, cks | 130 |
| Corks, bls | 47 |
| Dextrine, bgs | 100 |
| Glass Mirror, cs | 38 |
| Glass plate, cs | 6 |
| Glue, pgs | 14 |
| Grease, bbls | 60 |
| Licorice paste, cs | 100 |
| Opium, cs | 3 |
| Perfume, cs | 1 |
| Potato flour, bgs | 15 |
| Potash hydrate, cks | 4 |
| Potash chlo, kgs | 50 |
| Potash chlo, cs | 10 |
| Potash sulph, cks | 5 |
| Red lead, kgs | 20 |
| Saltpeter, bgs | 341 |
| Soap castile, cs | 10 |
| Soda bicarb, kgs | 10 |
| Soda caustic, drs | 20 |
| Sponge, bls | 69 |
| Sponge, cs | 2 |
| Ultramarine, cks | 5 |
| Varnish, gls | 2 |

## TOTAL DOMESTIC RECEIPTS.

FOR WEEK ENDING SEPTEMBER 3, 1888.

| | | For week. | Since Jan 1. |
|---|---|---|---|
| Alcohol | bbls. | 535 | 17,097 |
| Ashes | pkgs. | .. | 1,435 |
| Beeswax | pkgs. | 7 | 636 |
| Borax | pkgs. | .. | 32,935 |
| China clay | cks. | 42 | 4,790 |
| Cottonseed | bags. | .. | 5,503 |
| Meal | bgs. | .. | 35,339 |
| Cake | bgs. | .. | 71,984 |
| Soap stock | bbls. | .. | 1,125 |
| Flaxseed | bush. | 1,650 | 11,795 |
| Grease | pkgs. | 250 | 27,912 |
| High Wines | bbls. | 552 | 37,639 |
| Lead | pigs. | 5,018 | 257,457 |
| Mustard seed | bgs. | .. | 6,248 |
| Oil, Cottonseed | bbls. | 552 | 64,744 |
| Lard | bbls. | 180 | 4,168 |
| Linseed | bbls. | .. | .. |
| Lubricating | bbls. | 336 | 28,612 |
| Cake | bags. | 700 | 140,589 |
| Oleo stock | pkgs. | 70 | 13,411 |
| Pitch | bbls. | 76 | 2,279 |
| Quicksilver | flks. | .. | 3,701 |
| Rosin | bbls. | 3,700 | 265,223 |
| Stearine | pkgs. | 375 | 2,976 |
| Sumac | bags. | .. | 32,777 |
| Tallow | pgs. | 1,294 | 32,834 |
| Tar | bbls. | 783 | 19,448 |
| Turpentine, crude | bbls. | 60 | 1,324 |
| Spirits | bbls. | 1,657 | 66,807 |

## NEW YORK DOMESTIC RECEIPTS.

For week ending Sept. 3.

ALCOHOL—535 bbls, J A Webb, Penn RR
BEESWAX—2 pgs, order, str, Richmond
3 pgs, Smith & N, str, Galveston
1 pg, J K Cilley & Co, str, Charleston
1 pg, Belt & B, str, Brunswick
CLAY—30 cks, C B Barber, str, Charleston
12 cks, Sergeant Bros, str, Port Royal
FLAXSEED—1,650 bush, various, Erie RR
GREASE—113 pgs, order, N R boats
22 pgs, order, Penn RR
20 pgs, order, H R RR
30 pgs, E S Kuh & T, D, L & W RR
5 pgs, order, D, L & W RR
60 pgs, Fayerweather & L, str, Richmond
HIGH WINES—65 bbls, J A Webb, Penn RR
140 bbls, G W Kidd & Co, D, L & W RR
150 bbls, T C Pollock, Penn RR
132 bbls, J L Hasbrouck, D, L & W RR
65 bbls, Curtiss & Co, Penn RR
LEAD—2,043 pigs, order, H R RR
2,975 pigs, order, Penn RR
OIL COTTONSEED—100 bbls, Faith Oil Co, str, Galveston
352 bbls, order, N R boats
100 bbls, G H Williams, str, N O
LARD—150 bbls, order, H R RR
30 bbls, Middleton & Co, Balt Inland
LUB—11 bbls, order, H R RR
315 bbls, order, Erie RR
OIL CAKE—112 bgs, I & C Moore & Co, Erie RR
570 bgs, Simmonds & G, L V RR
108 bgs, I & C Moore & Co, B & O RR
OLEOSTOCK—70 pgs, H O Armour, H R RR
PHOSPHATE ROCK—2,000 bgs, order, str, Charleston
PITCH—75 bbls, order, str, Wilmington
1 bbl, forward, str, Wilmington
ROSIN—280 bbls, order, str, Wilmington
100 bbls, Paterson, D & Co, str, Richmond
201 bbls, G Potter & Co, str, Charleston
200 bbls, G Potter & Co, str, Fernandina
120 bbls, G Potter & Co, str, Brunswick
108 bbls, Paterson, D & Co, str, Brunswick
470 bbls, Dutton & W, str, Savannah
350 bbls, Murchison & Co, str, Savannah
250 bbls, C S Higgins, str, Savannah
472 bbls, J Turton's Sons, str, Savannah
543 bbls, M W Larendon, str, Savannah
245 bbls, forward, str, Savannah
56 bbls, Hueston & Co, str, Richmond
395 bbls, G W Bailey & Co, str, Richmond
SPONGES, ALAMO—51 bls, Lebess Sponge Co, Key West
COMAL—36 bls, Lebess Sponge Co, Key West
STEARINE—10 tcs, H W Calef, Penn RR
125 tcs, Fairbank & Co, H R RR
20 tcs, D C Link, Penn RR
75 tcs, Fowler Bros, Erie RR
70 tcs, G H Williams & Co, Erie RR
75 tcs, H O Armour, Penn RR
TALLOW—280 pgs, G Vandenhove, H R RR
94 pgs, order, H R RR
60 pgs, E Winter, Penn RR
7 pgs, D S Brown, L V RR
12 pgs, G B Ferris & Co, C RR of N J
11 pgs, Welch, H & C, C RR of N J
38 pgs, order, Balt In
141 pgs, order, N R boats
9 pgs, order, Penn RR
95 pgs, H W Calef, Penn RR
11 pgs, order, D L & W RR
9 pgs, D L Brown, D L & W RR
18 pgs, H W Calef, L V RR
45 pgs, H W Calef, C RR of N J
68 pgs, G Vandenhove, N R boats
16 pgs, order, L V RR
21 pgs, Welch, H & C, L V RR
7 pgs, C S Higgins, C RR of N J
9 pgs, B T Babbitt, C RR of N J
51 pgs, H W Calef, N R boats
10 pgs, Kuh & T, N R boats
6 pgs, J Hecht, Erie RR
20 pgs, A Cook, Erie RR
85 pgs, Colgate & Co, Penn RR
98 pgs, G Vandenhove, N Y W S & B RR
50 pgs, S Kuh & T, C RR of N J
31 pgs, G Vandenhove, D L & W RR
TAR—342 bbls, forward, str, Wilmington
425 bbls, order, str, Wilmington
16 bbls, Z Mills, str, Richmond
SP TURP—5 bbls, forward, Str, Wilmington
20 bbls, G Potter & Co, str, Wilmington
263 bbls, order, str, Wilmington
196 bbls, G W Bailey & Co, str, Richmond
319 bbls, Tolar & H, str, Richmond
15 bbls, Hueston & Co, str, Richmond
20 bbls, G Potter & Co, str, Richmond
16 bbls, Z Mills, str, Charleston
25 bbls, W H Wiggins, str, Charleston
50 bbls, forward, str, Charleston
88 bbls, G Potter & Co, str, Brunswick
500 bbls, Paterson, D & Co, str, Brunswick
120 bbls, Dutton & W, str, Savannah
10 bbls, order, str, Savannah
8 bbls, Welch H & C, str, Wilmington
2 bbls, T M Robinson & Co, str, Richmond
CRUDE—60 bbls, forward, str, Wilmington

## WILMINGTON DOMESTIC RECEIPTS

For week ending Sept. 1.

ROSIN—2,181 bbls, Inland
TAR—1,059 bbls, Inland
TURPENTINE SPIRITS—1,281 cks, Inland
CRUDE—546 bbls, Inland

## CHARLESTON DOMESTIC RECEIPTS

For week ending Aug. 31.

CLAY—382 cks, S C RR
ROSIN—754 bbls, N E RR
196 bbls, C & S RR
1,227 bbls, S C RR
TURPENTINE SPIRITS—236 bbls, N E RR
89 bbls, C & S RR
302 bbls, S C RR

## BOSTON DOMESTIC RECEIPTS

For week ending Sept. 1.

CLAY—24 cks, str, Savannah
COTTONSEED MEAL—480 bush, B & A RR
GREASE—161 bbls, B & A RR
22 pgs, 2 bbls, B & M RR
56 bbls, O C RR
13 bbls, F RR
10 bbls, N Y & N E RR
19 bbls, B & P RR
30 bbls, by sea
71 tcs, G J RR
TALLOW—50 tcs, 81 bbls, B & A RR
34 bbls, 3 pgs, O C RR
9 tcs, 90 bbls, 6 pgs, B & M RR
31 bbls, F RR
9 pkgs, B & P RR

## NEW ORLEANS DOMESTIC RECEIPTS.

For week ending Aug. 31.

ALCOHOL—25 bbls, Ill C RR
BONES—1 car, T & P RR
1 car, Sou Pac RR
COTTONSEED—1,376 sks, Shreveport
235 sks, Bayou Sara
1 car, Sou Pac RR
1,673 sks, Greenville
1,429 sks, Vicksburg
MEAL—16 cars, Louis & Nash RR
1 car, L, N O & T RR
GLUCOSE—2 cars, L N O T HR
GREASE—1 car, L, N O & T RR
NAPHTHA—1 car, L, N O & T RR
OIL—2 cars, N O & N E RR
60 bbls, Tex & Pac RR
1 car, L N O & T RR
1 car, L & N RR
60 bbls, S P RR
CAKE—1 car, L N O & T RR
PETROLEUM—3 cars, L N O & T RR
PITCH—4 bbls, St Louis
PUTTY—3 bbls, St Louis
SOAP—1,469 bxs, Ill Cent RR
STARCH—4 cars, L N O & T RR
550 bxs, Ill Cent RR
1 car, N O & N E RR
TALLOW—2 bbls, Sou Pac RR
65 bbls, St Louis
TURPENTINE—2 cars, N O & N E RR
WHITE LEAD—573 kgs, St Louis

## EXPORTS FROM NEW YORK FOR THE WEEK ENDING SEP. 3.

ACID
2 cbys $10 Camerata, Porto Rico
99 cbys $350 Havana, Havana

ACID SALICYLIC
1 cs $170 Colorado, Aspinwall

ANNATTO SEED
11 bgs $182 Alvo, Carthagena

ACID MURIATIC
200 cbys $373 Havana, Havana

ALCOHOL
2,343 gls $984 A Bradshaw, Pt au Prince
2,000 gls $722 Maria, Santa Cruz de la Palma

BARK EXTRACT
2,044 lb $45 Devonia, Glasgow

BAY RUM
6 cs $55 Waubun, Capetown, S Af

BONES
34 bgs $70 E Monarch, London

BONE ASH
100 lb $12 Colorado, Aspinwall

BRIMSTONE
18 bbls $170 Portia, Halifax
5 bbls $18 Mars, Venezuela
1 bbl $7 Juliet, Campeache, Mexico

CAMPEACHE EXT
1 cs $5 Mars, Venezuela

CANDLES
200 bxs $367 Camerata, Porto Rico
72 bxs $111 Bermuda, St Lucia
11 bxs $20 Bermuda, Domenica
25 bxs $116 Cearense, Para
16 bxs $19 Alvo, Carthagena
12 pgs $205 Colorado, Aspinwall
5 cs $50 Stroma, Georgetown

CARBON
50 bbls $560 Handel, Liverpool

CASSIA
32 bls $92 Camerata, Porto Rico
2 bls $5 Prins Mauritz, Pt au Prince

CEMENT
165 bbls $383 C of Atlanta, Havana
15 bbls $19 Havana, Havana
105 bbls $113 Mexico, Havana
5 bbls $16 Juliet, Campeche, Mexico
6 bbls $9 Haytian Rep, Grand Turk

CHALK
17 bbls $19 Camerata, Porto Rico

COPPER PAINT
50 gls $70 Barracouta, St Kitts
10 gls $14 Haytien Republic, Grand Turk
58 gls $55 Mary Culmer, Nassau

CUMMIN SEED
6 bgs $92 Alvo, Carthagena

DRYER
103 gls $31 Ocean, Bremen

DYEWOOD EXTRACT
60,000 lb $4,828 Gellert, Hamburg
7,436 lb $301 Devonia, Glasgow
12,480 lb $750 France, London

GINSENG
14 bbls $3,500 Colorado, Hong Kong

GLUE
125 lb $18 Camerata, Porto Rico
552 lb $45 C of Atlanta, Havana
25 lb $7 Mars, Venezuela
572 lb $62 Manhattan, Havana

GREASE
30,000 lb $1,150 Fulda, Bremen
728 lb $58 Cearense, Pernambuco
33,590 lb $2,115 Juliet, Campeache, Mexico
51,943 lb $5,000 Belgenland, Antwerp

GUANO
1,722 bgs $4,300 Niagara, Havana
3,780 bgs $10,170 C of Atlanta, Havana

GUM
2,364 lb $205 E Monarch, London

GUM ARABIC
100 lb $70 Juliet, Campeache

JAPAN
480 gls $408 Fulda, Manila

LOGWOOD EXTRACT
5,536 lb $471 Leerdam, Rotterdam
1,150 lb $23 C of Atlanta, Havana
108,002 lb $856 Olympia, Gibraltar

LUBRICATING GREASE
180 lb $14 Mabel Purdy, St John, N B
877 lb $30 C of Atlanta, Havana
9 cs $21 Waubun, Cape Town

MATCHES
18 cs $90 A Bradshaw, Pt au Prince
3 cs $43 Barracouta, St Croix
34 cs $498 Alvo, Carthagena
6 cs $40 Mary Culmer, Nassau

METALLIC PAINT
2,000 lb $25 Portia, Halifax

OCHRE
562 lb $11 Mars, Venezuela

OIL CAKE
105,600 lb $1,580 Belgenland, Antwerp

OIL CASTOR
2 cs $34 Alvo, Carthagena

OIL COD LIVER
5 pgs $129 Camerata, Porto Rico
2 pgs $90 Niagara, Mexico
61 pgs $1,805 Allianca, Brazil
18 pgs $549 Alvo, Carthagena
24 cs $20 Colorado, Aspinwall
2 cs $39 Stroma, Georgetown

OIL COTTONSEED
100 gls $50 Bermuda, St Lucia
40 gls $24 Bermuda, Domenica
302 gls $158 Bermuda, Br West Indies
2,500 gls $1,200 Leerdam, Rotterdam
94 gls $47 Barracouta, Grenada
5,000 gls $3,000 Belgenland, Antwerp

OIL ESSENTIAL
9 cs $302 La Champagne, Havre

OIL LARD
320 gls $165 O. Thurlow, Buenos Ayres
94 gls $63 Barracouta, Grenada
1,250 gls $800 France, London
2,160 gls $1,530 Waubun, Capetown, S Africa
197 gls $128 Alvo, Carthagena
2,383 gls $1,574 Stroma, Georgetown

OIL LINSEED
53 gls $30 Camerata, Porto Rico
104 gls $56 Niagara, Mexico
50 gls $50 Haytian Republic, Hayti
93 gls $60 Juliet, Campeache
100 gls $91 Alvo, Carthagena
92 gls $25 Mary Culmer, Nassau

OIL LUBRICATING
945 gls $85 Mabel Purdy, St John, N B
2,000 gls $4,000 Josephine, Rio Janeiro
5,169 gls $1,827 Allianca, Brazil
168 gls $11 Cearense, Para
4,568 gls $352 La Champagne, Havre
425 gls $50 Aurania, Liverpool
1,257 gls $225 Gellert, Hamburg
83 gls $8 City of Atlanta, Havana
2,500 gls $375 O Thurlow, Buenos Ayres
3,250 gls $3,117 Edam, Amsterdam
49,810 gls $8,010 E Monarch, London
20,928 gls $3,645 Devonia, Glasgow
5,950 gls $960 Critic, Leith
62,550 gls $9,900 Wisconsin, Liverpool
320 gls $137 Waubun, Capetown, S Af
22 gls $18 Alvo, Carthagena
271 gls $217 Trave, Bremen
19,155 gls $3,350 Belgenland, Antwerp
7,540 gls $2,505 C of Chester, Liverpool
493 gls $150 Prins Mauritz, Pt au Prince
1,200 gls $600 Olympia, Gibraltar
60,950 gls $9,600 Gallia, Liverpool

OIL MEAL
15,000 lb $234 Bermuda, Antigua
57,750 lb $802 Bermuda, Br West Indies
2,250 lb $45 Bermuda, Grenada
750 lb $12 Bermuda, Domenica
31,250 lb $500 Britannia, Bridgetown
93,750 lb $1,275 Barracouta, Barbadoes
24,250 lb $347 Barracouta, St Kitts
1,250 lb $24 Barracouta, Grenada
30,050 lb $590 Barracouta, St Croix
1,568 lb $25 Prins Mauritz, Pt au Prince
29,802 lb $466 Stroma, Georgetown

OIL OLEO
24,000 lbs $2,150 La Champagne, Havre
249,819 lbs $21,933 Leerdam, Rotterdam
16,916 lbs $1,470 E Monarch, London

OIL PEPPERMINT
236 lb $660 Belgenland, Antwerp

OIL TAR
1 kg $15 Alvo, Carthagena

OIL WHALE
10 gls $6 Haytian Republic, Grand Turk

PARAFFINE WAX
47,650 lb $4,050 Exeter City, Bristol
225,150 lb $18,000 E Monarch, London
336,319 lb $18,000 Critic, Leith
22,898 lb $1,055 Wisconsin, Liverpool

PEPPER
73 bgs $1,203 Camerata, Porto Rico
2 bgs $24 A Bradshaw, Pt au Prince
1 bg $20 Haytian Republic, Hayti
14 bgs $300 Juliet, Campeache
1 bg $19 Alvo, Carthagena
3 bgs $61 Prins Mauritz, Port au Prince
1 bg $19 Mary Culmer, Nassau

PETROLEUM JELLY
3 cs $30 Camerata, Porto Rico
5 cs $200 Allianca, Brazil
1 cs $6 Orinoco, Barbadoes
1 pg $5 Mars, Venezuela
28 cs $1,327 France, London

PITCH
21 bbls $30 Alvo, Carthagena

QUERCITRON BARK
852 bgs $1,280 La Champagne, Havre

QUICKSILVER
30 flks $1,221 Colorado, Aspinwall

RED LEAD
2 kgs $3 Camerata, Porto Rico
5 kgs $10 A Bradshaw, Pt au Prince

ROSIN
3 bbls $9 Bermuda, Pt Spain
5 bbls $10 Bermuda, Br West Indies
6 bbls $14 A Bradshaw, Pt au Prince
5 bbls $11 Camerata, Porto Rico
620 bbls $1,139 Josephine, Rio Janeiro
342 bbls $812 Allianca, Brazil
500 bbls $981 Cearense, Para
4 bbls $11 Haytian Rep, Hayti
6 bbls $20 C of Atlanta, Havana
85 bbls $205 Mars, Venezuela
20 bbls $100 Mexico, Vera Cruz
1 bbl $3 Alvo, Carthagena
810 bbls $2,108 Laura, Montevideo

SALTPETER
2 kgs $14 Niagara, Mexico

SARSAPARILLA
1,186 lb, $375 Fulda, Bremen

SERPENTARIA
982 lbs $200 E Monarch, London

SOAP
2 bxs $3 Bermuda, Barbadoes
7 bxs $11 Bermuda, Br West Indies

3,200 bxs $1,861 A Bradshaw, Pt au Prince
10 bxs $14 Allianca, St Thomas
5 cs $94 Allianca, Brazil
730 bxs $707 Cearense, Para
115 bxs $1,280 La Champagne, Havre
10 bxs $35 Portia, Halifax
14 bbls $192 Republic, Liverpool
6,526 bxs $3,287 Haytian Rep, Hayti
1 cs $10 C of Atlanta, Havana
6 bxs $27 Barracouta, Grenada
1,050 bxs $2,550 E Monarch, London
160 bxs $400 Devonia, Glasgow
50 bxs, $70 Nile, Turk's Island
1,500 bxs $870 Claribel, Hayti
200 bxs $279 Wanbun, Capetown
7 bxs $23 Haytian Republic, Grand Turk
101 bxs $349 Alvo, Carthagena
300 bxs $158 Alvo, Jeremie
833 bxs $532 Mary Culmer, Nassau
63 bbls $185 Mary Culmer, Nassau

SODA CAUSTIC

5 dms $114 Havana, Havana
10 dms $195 Juliet, Campeache, Mexico

SODA SILICATE

40 bbls $262 Mabel Purdy, St John, N B

SPERMACETI

1,587 lb $490 Fulda, Bremen

SPONGE

5 bbls $110 E Monarch, London

STARCH

5 bxs $6 Bermuda, Antigua
1 bx $6 Bermuda, Br West Indies
20 bxs $28 Camerata, Porto Rico
10 bxs $13 Portia, St John's
5 bbls $10 bxs $48 Barracouta, St Croix
25 bbls $187 France, London
1 bbl $6 Haytian Republic, Grand Turk
54 pgs, $107 Mary Culmer, Nassau
bbls $48 Colorado, Aspinwall

STEARINE

21,400 lb $1,284 Leerdam, Rotterdam

TALLOW

1,250 lb $88 Bermuda, Barbadoes
33,609 lb $1,200 Republic, L'pool
223,657 lb $8,946 Leerdam, Rotterdam
106 lb $7 Haytian Republic, Hayti
14,250 lb $712 E Monarch, London
29,530 lb $1,402 Martello, Hull
26,400 lb $1,320 Critic, Leith
338 lb $20 Mary Culmer, Nassau
3,770 lb $226 Stroma, Georgetown

TAR

13 bbls $33 Mabel Purdy, St John N B
6 bbls $16 Bermuda, Antigua

10 bbls $30 Bermuda, Pt Spain
6 bbls, 1 cs $40 Camerata, Porto Rico
5 bbls $14 Niagara, Mexico
1 bbl $3 H Republic, Hayti
10 bbls $27 Juliet, Campeache, Mexico
10 bbls $16 Nile, Turk's Island
2 cs $6 Waubun, Cape Town
6 bbls $17 Alvo, Carthagena
4 bbls $14 Alvo, Jeremie

TURPENTINE

476 gls $199 Camerata, Porto Rico
238 gls $90 Mabel Purdy, St John, N B
70 gls $29 Bermuda, Br West Indies
3,100 gls $1,272 Josephine, Rio Janeiro
800 gls $380 Cearense, Para
500 gls $200 C of Atlanta, Havana
400 gls $180 Moss Rose, Sante Fe, Arg Rep
929 gls $525 Waubun, Cape Town
104 gls $47 Alvo, Carthagena
360 gls $151 Manhattan, Havana
150 gls $58 Mary Culmer, Nassau
4,000 gls $1,645 Laura, Montevideo
200 gls $116 Peerless, Pt Natal
260 gls $109 Stroma, Georgetown

VARNISH

154 gls $24 Mabel Purdy, St John, N B
40 gls $36 Bermuda, Barbadoes
220 gls $273 Fulda, Manila
74 gls $71 Camerata, Porto Rico
50 gls $42 C of Atlanta, Havana
20 gls $20 Mars, Venezuela
20 gls $16 Maria, Santa Cruz de la Palma
50 gls $40 Julien, Campeache, Mexico
100 gls $394 La Bretagne, Havre
40 gls $13 Alvo, Carthagena
100 gls $117 Peerless, Pt Natal
60 gls $67 Stroma, Georgetown
508 gls $527 Laura, Montevideo
20 gls $24 Colorado, Aspinwall

WAX

750 lb $225 France, London

## New York to San Francisco.

American steamer Colorado, cleared Sept. 1 via Aspinwall.

Grease—19lb, $575
Oil lard—1,000 gls, $850
Potash—7 cks, $271

## San Francisco Exports.

For week ending Aug. 22.

ASPHALTUM

5 bbls, Mexico, Victoria

BORAX

300 lb, Granada, Mexico

CANDLES

55 bxs, Australia, Honolulu
260 bxs, Granada, Mexico

FERTILIZER

520 sks, Anna, Kahului

GINSENG

17,024 lb, Arabic, China

OIL WHALE

3,537 gls, A McNeill, Sydney

PAINTS

21 pgs, Australia, Honolulu
29 pgs, Granada, Central America

QUICKSILVER

62 fl, Granada, Mexico
500 fl, Arabic, China

SAGO

3,123 lb, Granada, Mexico

SOAP

124 bxs, Australia, Honolulu
27 bxs. Anna, Kalului
21 bxs, Mexico, Victoria
53 bxs, Arabic, China

SODA

890 lb, Australia, Honolulu
2,500 lb, Mexico, Victoria
3,000 lb, Granada, Cent Am

SPICES

14 pgs, Australia, Honolulu
35 pgs, Mexico, Victoria
9 pgs, Granada, Cent Am
21 pgs, Granada, Mexico

STARCH

1,112 lb, Australia, Honolulu
80 bxs. S N Castle, Honolulu
2,000 lb, Granada, Cent Am

TALLOW

6,055 lb, Granada, Mexico

## New Orleans Exports.

For week ending Aug. 31.

COTTONSEED MEAL

80 sks, Foxhall, Carthagena

LEAD

954 pigs, Actor, Liverpool

SOAP

90 bxs, Wanderer, Puerto Cortez, etc

TALLOW

37 bbls, Foxhall, Carthagena

TURPENTINE

10 bbls, Venezuela, Liverpool

## Charleston Exports.

For week ending Sept. 1.

ROSIN

350 bbls, Ercole, Hamburg
2,342 bbls, Sollecito, Genoa

TURPENTINE

1,586 cks, Ercole, Hamburg

TURPENTINE CRUDE

2 cks, Ercole, Hamburg

## Boston Exports.

For week ending Sept. 1.

ACID

4 cbys, Sarah, Yarmouth
20 cbys, Spring Bird, St John

AMMONIA

10 cbys, Sarah, Yarmouth

CEMENT

300 bbls, C Loring, Aspinwall

CUTCH

25 bbls, Worcester, Liverpool

GLUCOSE

10 bbls, Worcester, Halifax

GREASE

571 bbls, Pavonia, Liverpool

LOGWOOD

29 pgs, Worcester, Halifax, etc

OIL CAKE

1,337 sks, Michigan, Liverpool

PAINT

6 cs, Phoenician, Glasgow
15 cs, Worcester, Halifax, etc

SALT

40 bxs, Ocean Star, St Johns

TALLOW

48 hhds, Michigan, Liverpool
70 hhds, Phoenician, Glasgow

TAR

15 bbls, Spring Bird, St John

WAX

90 bbls, Phoenician, Glasgow

## Philadelphia Exports.

For week ending Aug. 31

OIL LUB

300 bbls British King, Liverpool

SOAP

5 cs 1,175 pgs Br King, Liverpool

TALLOW

20 hhds Br King, Liverpool

## Baltimore Exports.

For week ending Aug. 30.

BARK

576 bgs America, Bremen
484 bgs Albano, Rotterdam

BARK EXT

325 bxs America, Bremen

OIL ANIMAL

12 bbls Cearance, Para

OIL LUB

50 bbls Minnesota, London

OLEO STOCK

296,000 lb Albano, Rotterdam

ROSIN

2,000 bbls America, Bremen
1,000 bbls Caspian, Liverpool

SOAP

1,190 bxs Minnesota, London

STARCH

5,450 bxs Albano, Rotterdam

## GOODS ON THE WAY TO THE UNITED STATES BY SAIL.

### Calcutta

TO NEW YORK.

Sam Skolfield, 4,251 bgs cutch, 6,488 bgs linseed, 125 cs indigo, 100 cs buttonlac
L J Morse, 6,262 bgs cutch, 5,399 bgs linseed, 61 cs indigo, 100 cs castor oil, 1,000 bgs ginger.
San Joaquin, 5,998 bgs cutch, 3,458 bgs linseed, 61 cs indigo, 50 cs buttonlac, 500 cs castor oil, 200 kgs myrabolans
Charles Dennis, 552 bgs saltpeter, 1,063 bgs cutch, 20 cs indigo
Vigilant, 1,124 bgs saltpeter, 1,010 bxs cutch 6,195 bgs cutch, 5,000 bgs linseed, 100 cs shellac, 200 cs castor oil
Gilernix, 3,706 bgs saltpeter, 1,106 bgs cutch, 21,871 bgs linseed, 50 cs shellac, 75 cs buttonlac, 1,000 bgs ginger

### Galle

TO NEW YORK.

Lucy A Nickels, 9,008 cwts cocoanut oil, 4,392 cwts plumbago, 374,312 ozs citronella oil, 27,216 ozs cinnamon oil.

### Cirgenti

TO CHARLESTON

Lenuccia, 500 tons brimstone seconds

TO PHILADELPHIA

Ferreri, 550 tons brimstone thirds

TO WOODS HOLE

Fortunata, 560 tons brimstone thirds

### Licata

TO CHARLESTON

Federico, 620 tons brimstone seconds
Emilia Ciampa, 580 tons brimstone seconds

TO WILMINGTON

Papa, 660 tons brimstone seconds

### Penang

TO NEW YORK

P J Carleton, 250 pls nutmegs and mace

### Singapore

TO NEW YORK

P J Carleton, 8,402 pls gambier, 168 pls tapioca flour, 1,258 pls flake tapioca, 1,780 pls gum copal, 168 pls white pepper, 722 pls black pepper, 99 pls patchouli
Emilie L Boyd, 9,287 pls gambier, 5,467 pls black pepper, 1,701 pls sago flour, 841 pls pearl tapioca, 1,689 pls flake tapioca, 431 pls cube gambier, 60 pls gum damar, 1,211 pls gum copal, 17 pls cassia transhipped
Wilhelm Anton, 11,722 pls gambier, 2,944 pls black pepper, 1,930 pls sago flour, 256 pls flake tapioca, 449 pls pearl tapioca, 117 pls gum copal, 57 pls gum damar, 288 cs gum copal transhipped
Steinvora, 11,346 pls gambier, 2,518 pls sago flour, 436 pls tapioca flour, 422 pls pearl tapioca, 2,515 pls flake tapioca, 3,799 pls black pepper, 417 pls cube gambier, 491 pls gum copal, 75 pls mace transhipped

### West Coast South America.

TO NEW YORK

Alice Reed 8,000 bgs nitrate soda
Angelsea, 10,000 bgs nitrate soda
John Bayley, 7,000 bgs nitrate soda
John Gill, 12,000 bgs nitrate soda
Madura, 9,000 bgs nitrate soda
S P Hitchcock, 23,000 bgs nitrate soda

TO BOSTON

Independence, 8,000 bgs nitrate soda

TO CHARLESTON

Serena, 6,000 bgs nitrate soda

TO HAMPTON ROADS

Carrie Winslow, 10,000 bgs nitrate soda
Charles G Rice, 8,000 bgs nitrate soda
Osberga, 13,000 bgs nitrate soda
St Marks, 20,000 bgs nitrate soda

TO PHILADELPHIA

Chesebrough, 15,000 bgs nitrate soda

RECORD OF VESSELS.

| Port & Name. | Sailed. | Last Reported. |
|---|---|---|
| *Calcutta.* | | |
| S Skolfield | March 29 | Spoken May 5 |
| L J Morse | May 1 | St Helena, July 29 |
| San Joaquin | May 9 | St Helena, pr Aug 9 |
| C Dennis | June 6 | |
| Vigilant | June 26 | |
| Gilernix | July 20 | |
| *Galle.* | | |
| L A Nickels | May 12 | St Helena, July 30 |
| *Girgenti.* | | |
| Lenuccia | July 25 | |
| Ferreri | July 9 | Tarifa, Aug 3 |
| Fortunata | July 17 | |
| *Licata.* | | |
| Federico | | |
| E Ciampa | July 24 | |
| Papa | July 8 | Tarifa, Aug 2 |
| *Singapore.* | | |
| P J Carleton | April 17 | New Anjer, May 18 |
| E L Boyd | May 31 | New Anjer, June 15 |
| W Anton | June 15 | |
| Steinvora | July 5 | |
| *W. C. South America.* | | |
| Alice Reed | May 22 | |
| C Winslow | June 26 | |
| Independence | July 6 | |
| Angelsea | June 14 | |
| Serena | June 23 | |
| C G Rice | July | |
| J Baizley | July | |
| John Gill | | Loading, Aug sailing |
| Osburga | | Loading, Aug sailing |
| Madura | | Loading, Aug sailing |
| S P Hitchcock | | Loading, Sept sailing |
| Chesebrough | | Loading, Sept sailing |
| St Marks | | Loading, Sept sailing |

## Baltimore Imports.

Comparative statement of the Imports at the port of Baltimore, commencing January 1st, 1888 and 1887:

| Articles. | This week. | Previously. | Same time '87 |
|---|---|---|---|
| Agricultural salt, tons. | 1,560 | 13,694 | 12,110 |
| Cement, casks | ... | 21,330 | 11,600 |
| Brims'ne & sulph'r tns | 740 | 8,908 | 6,752 |
| Guano, tons | 281 | 3,859 | 5,172 |
| Nitrate of soda, bgs | ... | 1,080 | 32,495 |
| Spirits turp, bbls | 319 | 11,338 | 16,566 |
| Rosin, bbls | 6,569 | 95,636 | 110,890 |
| Tar, bbls | 106 | 4,584 | 3,745 |

## Baltimore Exports.

Principal articles exported from Baltimore to foreign countries since 1st of January, 1888, and compared with same time 1887:

| Articles. | This week. | Previously. | Same time '87 |
|---|---|---|---|
| Bark quercitron, bgs | 1,000 | 16,551 | 27,049 |
| Sp. turpentine, gls | ... | ... | 4,000 |
| Rosin, bbls | 3,000 | 55,210 | 41,869 |
| Oil Cake, pgs | ... | 80,486 | 111,046 |
| Petroleum, gls | 113,357 | 5,341,892 | 5,959,652 |
| Tallow, lbs | 335,500 | 6,044,623 | 12,830,721 |

## TOTAL PACKAGES AND VALUES OF NEW YORK IMPORTS,

As returned by the Custom House for the week ending Aug. 31, 1888:

| | Pkgs. | Val. |
|---|---|---|
| Glass, plate | 154 | $12,124 |
| Glass, window | 10,490 | 13,634 |
| Looking glass plate | 214 | 37,807 |
| Arsenic | 423 | 4,294 |
| Acid, citric | 35 | 1,742 |
| Acid, oxalic | 48 | 2,109 |
| Acid salicylic | 20 | 2,976 |
| Acids, all other | 43 | 5,570 |
| Aniline colors | 460 | 30,777 |
| Aniline salt | 44 | 1,501 |
| Ammonia, muriate of | 66 | 2,572 |
| Argols | 949 | 53,046 |
| Alum | 359 | 885 |
| Albumen | 32 | 2,082 |
| Alizarine | 116 | 10,419 |
| Balsam copaiba | 9 | 310 |
| Balsam tolu | 4 | 102 |
| Balsam, other | 4 | 84 |
| Bark, Peruvian | 232 | 6,218 |
| Bark, other | 1 | 4 |
| Bay rum | 93 | 2,614 |
| Bleaching powder | 391 | 7,079 |
| Brimstone | .... | 7,841 |
| Bronze powder | .... | 11,661 |
| Buchu leaves | 2 | 128 |
| Chalk | .... | 1,388 |
| Calomel | 24 | 691 |
| Chemical salts | 21 | 989 |
| Cochineal | 50 | 2,500 |
| Cudbear | 28 | 491 |
| Cutch | 3,700 | 28,030 |
| Cuttlefish bone | 50 | 591 |
| Dragon's blood | 7 | 395 |
| Dextrine | 49 | 517 |
| Divi divi, tons | 92 | 161 |
| Dyewood extract | 174 | 5,590 |
| Ergot | 30 | 719 |
| Fish sounds | 2 | 303 |
| Flowers, arnica | 42 | 450 |
| Flowers, chamomile | 22 | 588 |
| Flowers, insect | 20 | 800 |
| Flowers, other | 21 | 515 |
| Fullers earth | 484 | 476 |
| Gambier | 1,385 | 19,252 |
| Gelatine | 104 | 3,833 |
| Glucose | 3 | 80 |
| Glycerine | 164 | 7,092 |
| Guinea grains | 260 | 2,000 |
| Gum arabic | 15 | 500 |
| Gum asphaltum | 40 | 54 |
| Gum, asafœtida | 21 | 350 |
| Gum, aloes | 167 | 1,691 |
| Gum chicle | 515 | 17,903 |
| Gum copal | 5 | 520 |
| Gum guiacum | 5 | 93 |
| Gum licorice | 25 | 717 |
| Gum, shellac | 909 | 25,986 |
| Gum senegal | 220 | 3,183 |
| Gum tragacanth | 29 | 977 |
| Gum, other | 33 | 2,551 |
| Glue | 222 | 15,102 |
| Insect powder | 50 | 2,756 |
| Indigo auxiliary | 24 | 1,013 |
| Indigo, carmine | 10 | 1,592 |
| Indigo, extract of | 20 | 926 |
| Iodine | 39 | 9,529 |
| Juniper berries | 200 | 684 |
| Locust beans | 223 | 438 |
| Manganese | 25 | 328 |
| Madder | 5 | 410 |
| Manuring salt | .... | 11,993 |
| Morphine | 19 | 1,907 |
| Nitrate strontia | 74 | 980 |
| Nutgalls, extract of | 13 | 1,113 |
| Archil liquor | 28 | 1,249 |
| Oxide of zinc | 300 | 3,047 |
| Oil, aniline | 25 | 3,085 |
| Oil, almonds | 5 | 250 |
| Oil, bergamot | 15 | 616 |
| Oil, cinnamon | 1 | 92 |
| Oil, cod | 25 | 241 |
| Oil, fusel | 100 | 733 |
| Oil, lavender | 3 | 188 |
| Oil, lemon | 84 | 2,317 |
| Oil, neroli | 1 | 300 |
| Oil, olive | 1,970 | 11,153 |
| Oil, palm | 1 | 19 |
| Oil, rapeseed | 50 | 922 |
| Oil, rose | 4 | 8,355 |
| Oil, tanners' | 250 | 17,623 |

| | | |
|---|---|---|
| Oil, thyme | 5 | 290 |
| Oil, other essential | 14 | 2,198 |
| Oil, all other | 213 | 468 |
| Opium | 45 | 10,223 |
| Orange peel | 200 | 411 |
| Paints, unspecified | .... | 6.458 |
| Paint, colcothar | 44 | 176 |
| Paint, drop black | 48 | 1,333 |
| Paint, iron oxide | 85 | 550 |
| Paint, ocher | 125 | 1,494 |
| Paint, orange mineral | 70 | 2,201 |
| Paint, red lead | 50 | 182 |
| Paint, rose pink | 30 | 125 |
| Paint, sienna | 80 | 817 |
| Paint, umber | 212 | 577 |
| Paint, Venetian red | 916 | 1,971 |
| Paint, white lead | 12 | 400 |
| Potash, chlorate | 286 | 3,975 |
| Potash, carbonate | 5 | 214 |
| Potash, caustic | 50 | 1,089 |
| Potash, prussiate | 55 | 4,428 |
| Persian berries, extract | 25 | 1,575 |
| Phosphorus | 105 | 5,835 |
| Plumbago | 170 | 333 |
| Quinine | 127 | 26,742 |
| Regulus antimony | 256 | 14,612 |
| Root, arrow | 10 | 80 |
| Root, ipecac | 12 | 1,950 |
| Root, licorice | 6,421 | 28,723 |
| Root, orris | 1 | 189 |
| Root, rhubarb | 10 | 313 |
| Root, sarsaparilla | 23 | 250 |
| Roots, squills | 55 | 383 |
| Roots, all other | 4 | 120 |
| Senna | 30 | 378 |
| Soda ash | 567 | 9,304 |
| Soda, caustic | 1,384 | 11,468 |
| Soda, hypo of | 172 | 1,254 |
| Soda, sal | 1,252 | 3,401 |
| Soda, sulphate | 8 | 40 |
| Sponges | 222 | 5,330 |
| Sumac | 850 | 2,551 |
| Sumac, extract of | 36 | 491 |
| Sugar of milk | 13 | 703 |
| Talc | 300 | 350 |
| Terra alba | 150 | 576 |
| Ultramarine | 68 | 1,986 |
| Vanilla beans | 74 | 36,404 |
| Other drugs | | 20,848 |
| Brandy | 97 | 1,908 |
| Cordials | 283 | 1,303 |
| Gin | 167 | 1,504 |
| Ginger ale | 200 | 576 |
| Mineral waters | 1,372 | 2,915 |
| Rum | 35 | 390 |
| Whiskey | 1,064 | 37,671 |
| Aluminum | 1 | 825 |
| Dutch metal | 24 | 7,598 |
| Cinnamon | 20 | 238 |
| Chillies | 43 | 180 |
| Cloves | 87 | 1,620 |
| Ginger | 85 | 445 |
| Mace | 59 | 3,046 |
| Nutmegs | 852 | 29,095 |
| Pepper | 499 | 9,203 |
| Pimento | 2 | 9 |
| Empty barrels | .... | 11,516 |
| Fustic | .... | 1,590 |
| Logwood, M lbs | 3,556 | 34,238 |
| Brushes | .... | 10,541 |
| Candles | .... | 56 |
| Clay | .... | 403 |
| Corks | .... | 2,022 |
| Cocoa, bgs | 2,654 | 42,102 |
| Cocoa, preparations of | 57 | 903 |
| Emery | .... | 12 |
| Matches | 100 | 547 |
| Musk | 1 | 428 |
| Plaster | .... | 10,025 |
| Portland cement | 9,049 | 8,360 |
| Perfumery | 28 | 2,959 |
| Seed, annatto | 29 | 368 |
| Seed, canary | 137 | 619 |
| Seed, castor | 610 | 1,399 |
| Seed, cardamom | 12 | 607 |
| Seed, coriander | 56 | 210 |
| Seed, cummin | 52 | 855 |
| Seed, fennel | 24 | 300 |
| Seed, fenugreek | 84 | 309 |
| Seed, millet | 404 | 936 |
| Seed, mustard | 1,000 | 6,455 |
| Linseed | 12,105 | 42,102 |
| Soap | 6 | 135 |
| Soap, castile | 1,350 | 3,901 |
| Stone, pumice | .... | 3,846 |
| Wax | .... | 1,677 |
| Whalebone | .... | 103 |

## Grindelia Robusta and Grindelia Squarrosa.*

BY WILLIAM HENRY CLARK, PH. G.

Grindelia robusta being officinal, and no thorough investigation having been made, it was thought desirable to do so. An analysis was made in the chemical laboratory of the college, and under the direction of Professor Henry Trimble, to whom I am indebted for many valuable suggestions. An analysis of Grindelia, squarrosa was also made at the same time, not only on account of its individual interest, but especially for purposes of comparison. The work, in general, was based on Dragendorff's Method of Plant Analysis.

### DESCRIPTION OF THE DRUGS.

G. robusta and G. squarrosa, as found in the market, consist of the leaves and flowering tops of the herbs. They belong to the natural order Compositæ, and are found west of the Rocky Mountains, especially in California.

There being, some uncertainty as to the means of distinguishing the two species, a few of the more important points of difference may be of interest.

The drugs from which each analysis was made were personally selected in the crude state from the large stock of a reliable house, and may be relied upon as genuine.

1. G. robusta is, as its name implies, a robust grower, with large numerous leaves; while G. squarrosa is more attenuated, the leaves smaller, and branches and leaves less numerous.

2. The color of G. robusta, as seen in the market, is of a greenish brown; that of G. squarrosa is much lighter, the involucre and stems being of a straw color, the leaves pea-green.

3. The leaves of G. robusta are ovate, slightly serrate, sessile or clasping; those of G. squarosa are lanceolate or obspatulate, more deeply serrate, and while the upper leaves may be sessile or clasping, those lower down are narrowed at the base to the midrib, which often extends half an inch or an inch from the stem before widening into the blade of the leaf.

4. The flower-heads of G. robusta are depressed globular, with the scales of the involucre closely appressed; those of G. squarrosa are nearly conical in shape, with the scales of the involucre extended or squarrose, giving the head somewhat the appearance of a burr.

### PROPERTIES.

G. robusta has the reputation of being almost a specific for certain forms of asthma, and externally in rhus poisoning. G. squarrosa has similar properties, but is less known and used.

### HISTORY OF PREVIOUS INVESTIGATIONS.

In 1876, Dr. C. J. Rademaker made a chemicti analysis of Grindelia robusta (New Remedies, July, 1876). He exhausted the drug with a hydro-alcoholic menstruum, obtaining from the evaporated residue, by treatment with ether, "an eleo-resin having the physical appearance of balsam of tolu and the odor of resin of turpentine." The oleo-resin was treated for alkaloid by treating with acidulated water-filtering, rendering alkaline, and agitating with ether. An aqueous solution of the ethereal residue had "an alkaline reaction, and under the microscope showed well-formed prismatic crystals."

On treating for organic acids by acidulating the alkaline fluid from which the base and oleo-resin had been extracted, agitating with ether, and evaporating the ethereal layer, a residue was obtained, the aqueous solution of which had an "acid reaction, completely neutralized alkalies and formed salts. Under the microscope the acid showed well-formed acicular crystals."

Before my work was completed an analysis of G. robusta was made by G. Linwood Libby, an abstract of which is given in the *Pharm. Era*, January, 1888. He found an oleo-rasin, an acid resin and a resin. He states that although he twice followed Dr. Rademaker's process carefully he was unable to verify his results.

### ANALYSIS.

For the quantitative analysis, 100 grams of each drug, in No. 80 powder, were used and subjected to the same treatment. The results were similar, hence the drugs will be considered together in the report. When not otherwise specified, the statements made apply to both. This is done to avoid repetition.

### I. TREATMENT WITH PETROLEUM ETHER.

The drug was exhausted with petroleum ether (boiling point below 45°) in successive portions. The amount soluble in this menstruum is G. robusta—8·87 per cent.; G. squarrosa—5·94 per cent. This residue was found to consist of vegetable wax and fixed and volatile oils in the following proportions:

G. robusta, wax, 0·41 per cent.; fixed oil, 8·27 per cent.; vol. oil, 0·19 per cent.

G. squarrosa, wax, 0·36 per cent.; fixed oil, 5·42 per cent.; vol. oil, 0·16 per cent.

The wax was of a white color, solid at ordinary temperatures, melted at about 53° C.; did not saponify with an aqueous solution of soda, but did with an alcoholic solution of soda. The addition of barium chloride formed a barium soap, insoluble in ether. The alcoholic filtrate from the soap was treated with ether and the ethereal solution evaporated, leaving a solid, white residue, melting at about 50° C., pointing to cetyl as a base.

The fixed oil was solid at ordinary temperatures, melting at 37° C., and was of a brown color. It gave a brown color on the addition of sulphuric acid. The oil was treated with a solution of caustic soda, sp. gr. 1·26. No saponification occurred, even on boiling. On diluting largely with water, however, it saponified readily, giving off the strong odor of the drug. Salt was added in excess and the soap collected. The residue was filtered, evaporated and tested by the flame test with the borax bead for glycerine, but with negative results. The soap was decomposed with hydrochloric acid and distilled with water. The distillate had oil globules floating on its surface, demonstrating the presence of a volatile fat acid. Its odor was aromatic and somewhat valerian-like. The yield from the amount examined was too small to determine its composition by ultimate analysis.

The non-volatile fat acids were separated by fractional precipitation with acetate of magnesium and found to consist of a mixture of palmitic, stearic and oleic acids.

Small quantities of the volatile oils were obtained by distilling each drug with water and shaking the distillate with petroleum ether. The oils resemble each other closely. They have an agreeable aromatic, pungent, somewhat mint-like odor and burning taste.

### II. TREATMENT WITH ETHER.

The petroleum ether remaining in the drug was evaporated, and the drug exhausted with successive portions of ether. Proportion extracted by this solvent:

G. robusta, 4·02 per cent., of which 3·80 per cent. is resin.

G. squarrosa, 6·92 per cent., of which 4·01 per cent. is resin.

The resin is soft (about the consistency of styrax), of a greenish-black color, having a smooth bland taste to the tongue, but after a short time having a very irritating effect on the fauces. It has the odor of the drug. It melts at about 40° C. On the addition of sulphuric acid the resin dissolves with a brown color and a rise in temperature. Nitric acid (sp. gr. 1·42) cold, gives a yellow-green color; on warming, effervescence takes place, with evolution of brown fumes of $NO_2$ and a peculiar smell.

The resin dissolves completely in a weak solution of the caustic alkalies, indicating that it is an acid resin. On neutralizing the resin with caustic alkali, concentrating and allowing to stand, prismatic crystals were obtained, colorless, with a cooling saline taste, and insoluble in hot and cold alcohol, chloroform and ether. A portion of the resin was treated with 20 per cent. alcohol, the residue treated with 50 per cent. alcohol, and so on with 75 per cent. and 94 per cent. 75 per cent. alcohol dissolved the larger portion, very little remaining; showing that a 75° menstruum would exhaust the drugs of their resinous constituents. The different fractions obtained have the same melting point and give the same color reactions as the original resin.

A portion of the ethereal extract was concentrated and precipitated in distilled water, the resin collected, dissolved in a little alcohol and reprecipitated in water containing one per cent sulphuric acid. Each of these aqueous solutions of the ethereal extract were treated with petroleum ether, benzol, chloroform and ether, successively, for alkaloids, glucosides, or bitter principles. The aqueous solutions were then rendered alkaline and again agitated with the same solvents, with negative results in each case, except that the chloroform residue gave a slight reaction for a glucoside with Fehling's solution, being the same glucoside that was extracted more freely by alcohol and water.

### III.—TREATMENT WITH ALCOHOL.

The drugs, freed from ether, were exhausted with successive portions of absolute alcohol. Extracted from G. robusta 2·04 per cent. and G. squarrosa 2·67 per cent. The dried residue was of a resinous or extract-like appearance, of a brown color, and acrid taste. Its aqueous solution was colored greenish black by ferric chloride, foamed on agitation, had an acid reaction and was precipitated by acetate of lead. The acidified aqueous solution gave marked alkaloidal reactions with the following reagents: potassio-mercuric iodide, tri-iodide of potassium, phosphomolybdic acid, tannin, potassio-bismuthic iodide, and picric acid. From this evidence it was assumed that an alkaloid was present. The acidified aqueous solution was agitated successively with the solvents previously used; then the solution rendered alkaline and again treated with solvents. A slight residue was obtained with each solvent—largest with chloroform—of a yellow color, soft and sticky, and of a burning, very acrid taste, especially affecting the palate. An aqueous solution of these residues was of neutral reaction; on adding the smallest portion of acid it was rendered permanently acid, and with the reagents did not give as heavy alkaloidal reactions as did the liquid which had been agitated with the solvents. No different results were obtained on testing a solution of the residues in acidulated water. One pound of each drug was then exhausted with strong alcohol, the alcohol evaporated, and the syrupy extract poured into water acidulated with one per cent. of sulphuric acid. After standing for twelve hours, with frequent stirring, the liquor was decanted, filtered, and agitated with solvents as before, both in acid and alkaline condition. The results were the same as those of the previous trial. Five pounds of G. robusta were then exhausted with alcohol and given the same treatment, also adding to the list of solvents acetic ether, carbon disulphide and fusel oil. No alkaloid was obtained. A portion of the solution was neutralized, evaporated to dryness and the residue agitated with solvents, with still a negative result. Extraction from the drug by Prollius's fluid was tried, also without success. The methods used would undoubtedly have extracted an alkaloid had one been present, so it is safe to say that none exists in these plants. The uniform positive reactions with the accepted alkaloidal reactions are difficult to explain, but they are probably caused by some albuminous matter peculiar to these plants.

The substance extracted by the various solvents was free from glucose until after boiling with dilute acid, showing that a glucoside had been extracted.

### IV.—TREATMENT WITH WATER.

| | G. robusta. per cent. | G. squarrosa. per cent. |
|---|---|---|
| Total extract | 12·16 | 12·88 |
| Containing ash | 2·80 | 2·51 |
| a. Mucilage and carbohydrates precipitated by alcohol | 2·17 | 1·93 |
| Yielding ash | 0·5 | 0·67 |
| b. Glucose | 1·36 | 1·90 |

Saccharose was not present.

(c) Saponin.—from the foamy, soapy-like character of the aqueous extract on agitation as well as the taste of the resin and of the glucoside extracted, it was inferred that saponin or an allied body was present. A quantitative estimation by the method adopted by Christophsohn and Otten*, was made with the following results: G. robusta, 2 per cent.; G. squarrosa, 0·82 per cent. saponin.

As far as I have been able to learn, these are the first plants of the natural order composite in which a saponin-like body has been found, and is therefore unique. It does not give the color-reaction of true saponin with sulphuric acid, but it possesses its attributes to a marked degree. It has its soapy character; acrid taste, affecting the fauces; is precipitated by baryta water; forms crystals with alkaline hydrates, and has a slight acid reaction. It is undoubtedly this that gives the acid reaction to the aqueous solutions of the various extracts. It was thought at first that this was due to the presence of organic acids; but on adding barium carbonate to the solution, it was not neutralized, even on boiling. Calcium carbonate also had no effect. Colorless, needle-shaped crystals of this saponin-like body were obtained by agitation with acetic ether (which had been freshly distilled over lime) evaporating, treating the residue with chloroform and evaporating in a dessicator over sulphuric acid. The principle in the two plants appears to be identical, and the name of "grindelin" is suggested for it. It is probable that the medical properties of the plants are due to this substance.

To a portion of the aqueous solution, sulphuric acid was added, and allowed to stand in a cool place for 48 hours. At the end of that time the liquid was observed to have a large number of minute acicular crystals floating in it. These were filtered off and dried, and on opening the filter, they separated in a thin, papery cone, glistening like benzoic acid. These crystals were thought to be the decomposition-product of grindelin, brought about by the action of the dilute acid in the cold, glucose being liberated.

To determine whether or not such was the case, a gravimetric estimation of the glucose in the liquid producing the crystals, and in the aqueous solution to which no acid had been added, was made. The supposition was verified, as the former yielded 0·26 per cent. more glucose than the latter. On burning a solution with dilute acids, a white insoluble substance separates out, which on standing unites into a resin, having properties identical with that found in the drug. The theory is advanced that the resin found in the drug is wholly a decomposition product of grindelin, the greater part of the glucose set free being used by the plant as a necessary constituent to its growth and development.

(d) Tannin.—A quantative estimation of tannin was made with gelatin, in the presence of alum. An immediate precipitation took place in the solution of G. robusta. After twelve hours this was filtered off, washed, dried and weighed. 50 per cent. of the dried residue was calculated as tannin, giving a yield of about 1½ per cent.

No tannin was found in G. Squarrosa, no precipitate having formed at the end of 12 hours.

### V. TREATMENT WITH DILUTE CAUSTIC SODA.

The drugs were exhausted with a dilute solution of caustic soda, and the substances soluble therein estimated as pectin, albuminoids, and allied bodies. G. robusta yielded 5·68 per cent.; G squarrosa 3.56 per cent.

### VI. TREATMENT WITH DILUTE HYDROCHLORIC ACID.

No starch is present in either drug.

Total extracted by above solvent: G. robusta 2·17 per cent., of which 1·06 per cent. is calcium oxalate. G. squarrosa 4·94 per cent., of which 1·00 is calcium oxalate.

### VII. DETERMINATION OF LIGLIN AND CELLULOSE.

The liglin was estimated by maceration with chlorine water. G. robusta 3·40 per cent. G. squarrosa 5·71 per cent.

The residue was macerated with nitric acid and potassium chlorate.

G. robusta, intercellular substance, &c., 30·24 per cent.; sand, cellulose, &c.. 12·53 per cent.

G. squarrosa, intercellur substance, &c., 25·44 per cent. sand, cellulose, &c., 15·02 per cent.

### VIII. ESTIMATION OF MOISTURE AND ASH.

G. robusta, moisture, 11·12 per cent., ash 7·77 per cent.

G. squarrosa, moisture, 11·7 per cent., ash 5·22 per cent.

A qualitative analysis of the ash showed the presence of potassium, sodium, calcium, magnesium and iron as bases, and sulphuric, hydrochloric, carbonic and phosphoric acids.

Not having been able to verify Dr. Rademaker's results, I exhausted 1 lb. of Grindelia

*Am. Jpur. Phar.*

* Dragendorff's Plant Analysis, page 68.

robusta with 75 per cent. alcohol and made a careful analysis according to his process, the results corresponding with my previous work. The substance which was extracted for "alkaloid" when treated with distilled water gave a neutral reaction; on adding one drop of water acidulated with sulphuric acid (1:500) the solution was rendered permanently acid. It was then tested, before and after boiling, with dilute acid and found to be a glucoside. The substance which came out as "organic acid," was of acid reaction, did not neutralize barium carbonate, and also reduced Fehling's solution after boiling with dilute acid, corresponding to the properties of the saponin-like body before referred to, and evidently identical with it.

## The Adulteration of Condiments.

BY W. P. TONRY.

When the juice of apples or of grapes is allowed to remain at rest at a moderate temperature, say 60° to 80° Fahrenheit, a chemical change takes place which is called fermentation, and the resulting products of this change are the formation of carbonic acid gas, which escapes, and alcohol, which remains in the liquid. This process is called vinous fermentation. If now this vinous fermentation is allowed to continue in the apple or the grape juice till no more alcohol can be found, and the liquid is still allowed to remain at rest at about the same temperature, another chemical change will commence and the liquid, which was sweet to the taste before, will now begin to turn sour, and continue to become more and more sour so long as this second change continues. This second change is called the acetic fermentation, and the alcohol that was formed during the first fermentation is converted into acetic acid, and the wine or cider is converted into vinegar. The liquid which remains is racked or drawn off, and is then known as wine or cider vinegar, according as it was formed from grape or apple juice. There is no other way of making wine or cider vinegar, and there is no other product than that mad from grape or apple juice by fermentation to which the name wine or cider vinegar should be applied. The acid principle in each of these kinds of vinegar is the same, viz., acetic acid, but the other organic constituents of each juice gave a flavor which is sufficiently characteristic to enable the vinegar to be recognized by taste and odor. These, however, were the vinegars of our grandfathers, and with a little searching some genuine lots can even yet be found; but not over one-tenth of all the vinegar used in the whole United States is either wine or cider vinegar. It matters not how the barrel is branded—whether as fruit vinegar, or white wine vinegar, or even frequently genuine cider vinegar—you have nine chances out of ten, as far as quality is concerned, of obtaining as a vinegar an article which has probably no other claim to be called a cider vinegar than the fact that it was distilled in some state in which there were apple trees.

There was an article in the market a few years ago that was called a wine vinegar, and was labelled as having been made from pure grape juice, and there were such a superabundance of nicely colored picture grapes on the label that nobody but a hard-hearted chemist would think of saying that it was not made from real, genuine California or Concord grapes. Then, too, the drummers were such good talkers, and the price, just to introduce it, you know, was so low. But alas, notwithstanding the label, the drummers and the price, the stuff was made from glucose, and had a liberal dose of sulphuric acid. As far as banishing this class of stuff from the market, the government did a wise thing in 1879 in allowing alcohol to be made free from tax, provided no condensing coil was used for the distillate. It is from this low wine process that nine-tenths of the vinegar sold in the United States is now made. When I say low wine process, do not understand me as meaning that even a single solitary grape is even used in the process. Not at all. You get your vinegar by this process from corn, though any grain capable of being fermented will do, and some of this so-called white wine vinegar that had been made from potatoes has been imported into this country.

When the books speak of mustard, or the physician orders mustard to be used medicinally, sinapis nigra, black mustard, or sinapis alba, white mustard, is intended; and the assumption is that the ground seed or pod of the plant will be furnished, and the genuine article, unmixed, can be obtained at the wholesale drug stores, and sometimes at the retail drug stores. In the grocery stores, if you ask for an imported English mustard, and will take the trouble to read carefully the label, you will find the article "warranted to be a pure mustard compound." They are more particular in England than we are here in this country about adulterations, and the English dealer must, by law, label his mixture as a mixture, and the brand from which the above quotation is copied is simply an adulterated mustard. Let me here state for the information of the American consumer, who pays the extra price for the foreign adulterated article, that he will have no difficulty in obtaining an American adulteration which will be just as skillfully prepared as the foreign and will probably be a little cheaper.

About 40 or 50 per cent. of adulteration seems to be the limit in ground mustard, and when it is confined to the use of corn starch, colored with turmeric, and enough Cayenne pepper or ginger to give bite, it is not so bad from a sanitary standpoint, while linseed meal as an adulterant begins to be a little suspicious. With all possible respect for the desire which the American people is said to show for being humbugged, I think the mustard adulterator should draw the line at yellow ochre, plaster of paris and sand, even if he does extract part of the fixed oil from the mustard, and calls the mustard cake, with some of the oil extracted, a pure mustard. Some very nice samples of yellow ocher can be obtained dirt cheap, especially when it is a little too gritty to be used for a paint, and I surmise that the sand which on analysis has been found in mustard, could be traced to the ocher. It is only an unskilful manipulator that will use plaster of paris as an adulterant when kaolin can be had for the digging and the cost of transportation.

The pepper of commerce is furnished by the Piper nigrum, or black pepper plant, which grows in the East and West Indies. There are two varities of pepper, known as black and white pepper, and both are obtained from the same plant. Black ground pepper is the entire berry of the plant reduced to powder, while the white consists of the same berry decorticated or deprived of its outer black husk or covering. The consumer of pepper can be accommodoted with an article adulterated to any extent from 10 to 90 per cent., and if he prefers to do his own adulteration, a New York "manufacturer of all kinds of spice mixtures" will supply him with the requisite material, while another New York house will make "goods to order for wholesale grocers and druggists" and furnish "spice mixtures." From inquiry among the trade in this city it would seem that the pepper mixture can be furnished at from 2 to 5 cents per pound, while pure pepper will cost about 18 cents per pound. The United States Agricultural Department chemists found bran, roasted shells, corn, cracker dust, charcoal and fibrous matter in samples of pepper.

The agricultural department did good work last year in its examination of adulteration in the line of spices, and it is to be hoped that its investigations will be continued in this line of investigations. From the report published as the result of the chemical and microscopical investigations made they have found ground shells, yellow corn and mineral color in allspice; rice flour, yellow corn, turmeric and mineral red in Cayenne; ground shells, crackers, turmeric and minerals in cassia; cassia, mustard hulls, turmeric minerals, cracker dust and burnt shells in cinnamon, and cereals, turmeric, mustard hulls and cayenne in ginger. From the report of Professor Lattimore on samples of commercial ground spices examined under the New York State law, out of 27 samples of allspice examined, 19 were adulterated; of cinnamon, 18 out of 22 samples were aduiterated, and 16 out of 21 of cloves, and 9 out of 15 of ginger. It is probably true, as a spice dealer remarked to me this week, that most of the adulterants used for spices are not injurious to health, and it is probably just as true that the reputation of the spices trade, as a whole, is very much below par as far as pure articles are concerned, much as the fact may be deprecated by some of the trade, who would gladly have it otherwise. Perhaps it is not too much to assume that the public have some rights which the trade should respect, and it would certainly seem that honest dealing demands that when an article is called for, the article called for should be furnished and not a partial substitute. If only a few articles were adulterated, and these adulterations were with materials that, while inert, were not positively injurious, there might be little cause for complaint; but when adulterations are general, and not always confined to inert substances, public health demands some protection.

## Russian Kerosene in Africa and Spain.*

Until the year 1885 Russian kerosene was quite unknown in Tunis. In the interior only vegetable oils were used for lighting purposes, and in towns near the sea border and sea ports of Tunis only American kerosene was obtainable, it being supplied either direct from the United States or through commission houses in Malta and Italy.

In 1885 the Geneose merchants first began to shpply Tunis with Russian kerosene, and it immediately gained the day and drove the American oil almost completely of the market.

The following figures taken from a statistical report published by the Tunis government shows the value of the kerosene imported in 1886 and 1887:

| | 1886. | 1887. |
|---|---|---|
| Russian kerosene..... | $40,230 | $39,415 |
| American kerosene... ..... | 15,475 | 580 |

In 1888 the demand for Russian kerosene increased considerably, owing to the orders that came from the interior, where it has begun to supplant vegetable oils.

The trade in Russian kerosene at Tunis is stil in its infancy. It has but just commenced,

*From an article on Russian kerosene trade w Tunis and Spain in the Moscow Cazette, Jun 13, 1888.

and the oil is only supplied in soldered tins of about 3¼ gallons each.

There can be no doubt that in future the importation of our kerosene will far exceed the figures above quoted, and if any of the Russian companies were to establish a central depot at Tunis a large and profitable trade would no doubt result. The whole of the northern coast of Africa, including Algeria and Tripoli, could eventually be supplied with Russian kerosene. But should a depot be established it would certainly be much more advantageous to supply the kerosene in casks or in bulk, as the tins sold add considerable to the cost of the oil.

Such a change would also be of great benefit to the Russian merchant fleet. The Italian steamers which at present monopolize the carrying of our kerosene in tins, are not allowed to carry inflammable oils, unless hermetically sealed; the transport in casks or in bulk would therefore pass over, without competition, to the Russian merchant ships, and would be carried from one of our Black Sea ports direct to the central depot in Tunis.

A still more important market for Russian kerosene is Spain. According to existing statistics the consumption of it amounts to 44,000 tons. The duty of kerosene imported into Spain is the same wherever it be imported from, no difference being made; as, for instance, in the case of spirits, where we are at a great disadvantage us compared with Germany, the latter a more favored nation, paying but $4 08, whereas Russian spirits pay $4 58.

With kerosene this is not the case. We are placed on an equal footing with America, and we should lose no time in securing the Spanish market if not in its entirety, at all events a fair share of it. I will now endeavor to show what conditions we have to meet in order to successfully compete for this trade.

The Spanish Government in its desire to protect the trade in vegetable oils of native production levies a heavy duty on mineral oil in its crude or unrefined state, and a much heavier duty on refined kerosene in order to encourage the refining of it in Spain. The duty was at one time $5 07 per hectoliter (about 22 gallons) of refined kerosene, and $2 32 for unrefined, and the results were that in 1886 only 580 tons of refined kerosene and 45,000 tons of crude or unrefined kerosene was imported, and several refineries were erected, giving a very handsome profit to their owners. With a view to still protecting the vegetable oils of native production, the duty on refined kerosene was again raised to $6 18, and for unrefined to $4 05.

Under those conditions the importation of refined kerosene has become extremely difficult, but to import refined Russian oil is quite impossible, because the American gives much less residue; the consequence being that more refined kerosene is obtained from it than the Russian. Russian naphtha gives as much as 35 per cent residue.

In order to compete successfully with America, it is necessary to refine our naphtha at home, in Russia, to such an extent as to leave no more than 21 or 22 per cent of residue—it then pays the duty of unrefined kerosene, because all kerosene imported into Spain containing more than 20 per cent of residue is classed unrefined.

## Coal-tar as Fuel.

At the recent meeting of the North British Society of Gas Managers in Glasgow, Mr. John McCrae, of Dundee, read a paper on "Coal-tar as Fuel for Steam Boilers," Mr. McCrae said that in the Dundee Gaswork he had experiminted somewhat extensively to ascertain the true relative value of coal and tar as fuel. The coal he employed was that known as Stravenhouse small coal; costing 5s per ton delivered. The experiment in each case lasted 48 hours. The tar employed was boiled tar, the naphtha having previously been removed, but the pitch oil was leif in the tar. The value of this tar in Dundee was about 4s per ton. The following were the figures as the result of the experiments:—

| | £ | s. | d. |
|---|---|---|---|
| Coal, 10 tons 16 cwt., at 5s..... | 2 | 14 | 0 |
| Tar, 1,460 gallons (9 tons 3 cwt.—160 gallons=1 ton), at 4s.... ..... | 1 | 16 | 7 |
| Saving per day by using tar..... | 0 | 17 | 5 |

The figures were for a day recently; in winter the saving would be correspondingly greater. Dundee, he admitted, was peculiarly situated in this matter. It was a long distance from any tar distiller's works capable of dealing with the large quantity of tar they had for sale during the winter. Then again, Dundee being far distant from the coal fields, the coal was exceptionally high in price He quite believed that in many of the west country towns the coal for which they were paying 5s per ton could be had for 3s per ton, and for the tar for which they were receiving 4s per ton they would receive not much under the double; therefore, in a place so circumstanced, the figures he had given would be most misleading. Still he doubted not there were places as badly situated as Dundee, and it was to such places that his remarks were directed. He believed there was a future for liquid fuel. He did not say tar, but more concentrated fuel, such as crude naphthas, paraffins, and pitch oil. A few gallons of oil would give the steam-producing power of a ton of coal, and this was a fact which the owners of non-paying steamships should note. Everything he had said in regard to steamships applied to locomotives, and the comfort to the stokers and the general reduction in labor would be very marked indeed. Of course it might be argued that were such a large demand created for oils for furnaces the old-fashioned law of supply and demand might come into play, and so force up the price of the article for which the increased demand had taken place; but that state of matters was rather remote when they bore in mind the great oil wells only now becoming developed, and the oils from which could be run in bulk direct from the wells into ships and brought to this country at very low rates.

## The Nitrate Deposits of South America.

The nitrate beds on the west coast of South America according to the description of Dr. Carl Ochsenius, occur in a narrow strip along the coast line of the rainless district, rarely exceeding twenty-five miles in width. The district is bounded on the east by the Andes and extends into the coast Cordilleras on the south. The author considers that, before the upheaval of the Andes, salt began to deposit in certain bays, which had been wholly or partially shut off from the sea by the gradual formation of an intercepting bar. Then, while the process of evaporation was still incomplete, the district was raised by volcanic action, and the mother liquors from the salt lakes eventually escaped, running down into the valleys, and, where they encountered no obstacle, reaching the sea. The coast Cordilleras acted as a barrier in the southern portions of the district, while in the northern part the liquors doubtless returned to the sea. The volcanoes which produced the upheaval exhaled immense quantities of carbonic acid gas by the action of which a portion of the sodium chloride in the mother liquors was converted into sodium carbonate.

The coast in this part of Chili is studded with small islands containing deposits of guano rich in ammonia. The guano dust is carried by the prevailing west winds far into the country, where, on exposure to the air, at a warm temperature, it would gradually oxidize to nitrate, and, acting on the sodium carbonate, would form sodium nitrate or Chili saltpeter.

## Detection of Iron in Oil.

B. EMDE.

Dr. B. Emde in writing on this subject says: It is well known that iron plays an important part in Turkey red dyeing, as its effects must be most carefully avoided in producing pure, fine colors. In fact, only very small quantities of iron are necessary to injure the beauty of the alumina alizarin, and it is therefore of the greatest importance to the practical dyer to be able to detect the presence of iron by simple reactions.

The oil used in Turkey red dyeing contains from 15 to 20 per cent. free fatty acids, and consequently more or less fatty acids when the oil was transported or kept in iron vessels, or when it was prepared in such. To detect the iron rapidly in such an oil a quantity of the oil is shaken in a graduated cylinder with water acidified with sulphuric acid, and containing a few drops of potassium ferrocyanide solution. Then a few drops of ether are added and the solution again shaken. The oil dissolves in the ether and the solution separates distinctly from the acidified water. At the surface of contact between the two layers, in the presence of iron, a greater or less layer of Prussian blue is formed, which contains all the iron that was present in the oil.

When the same quantities of oil, water, acid and potassium ferrocyanide are used in making comparative tests, the depth of color, or thickness of the layer of Prussian blue, will serve as an indication of the quantity of iron present.—*Seifenf.*

## Canada Oil Report.

As will be seen by the appended report of operations on the exchange for the past two weeks, the market has shown within the last few days encouraging signs of improvement. The volume of business transacted has been greater and prices have ranged higher. The advance of the season, the comparative shortness of stocks and the unincreasing production encourage the belief that values must advance. The efforts of the wild-catter have proved abortive, and no alarmingly productive territory has been developed by their operations. Just what new features may be produced to defeat the legitimate trade results remains to be seen, but it should be the object of the producer to keep himself familiar with the devious paths of his business opponents and protect himself from their encroachments.

Rumor has it that the Standard Oil Company, of the United States, will probably own and operate the Alpha Works at Sarnia, and that an advance guard has been diligently spying out the land in the interests of that colossal combination. Should these surmises prove true it would be difficult to outline the future. The experience of the United States trade might be duplicated here, and it would certainly not be pleasant for many peop

The refined market is slightly more active, and the prospects for a good season's trade are improving as the days shorten. Up to the present the majority of the refineries have been running pretty short time, but orders are coming in and they are waking up.

The total clearances on the Petrolea Oil Exchange for the week ending Aug. 23 were 2,518 bbls; for the week ending Aug. 30, were 9,510 bbls.—*Petrolea Topic.*

## The English Petroleum Markets.

*London.*—The stock has rapidly accumulated at this port, and it is now heavier than that in either 1887 or 1886. Since our report of Friday last the market has completely recovered from the dulness then existing, and the pressure of weak holders to realize having ceased, transactions to some extent have taken place at a decided reaction in prices for *American Refined*, which is worth 7¼d to 7⅜d per gallon on the spot, 6⅞d to 7d for September to December deliveries, and 6½d for January to February; but the *Russian* description has mostly remained unaltered at 6¼d to 6⅜d for similar periods. American water-white oil has readily bought at 10d to 10½d per gallon; but other *Mineral Oils* are in only limited demand.

Petroleum oil in London for the thirty-three weeks ended August 20, with comparative stocks at that date:

| | 1888. Bbls. | 1887. Bbls. | 1886. Bbls. |
|---|---|---|---|
| **LANDINGS.** | | | |
| Petroleum oil | 545,428 | 475,556 | 451,856 |
| Crude oil | 12,201 | 7,066 | 19,470 |
| Petroleum spirit | 16,959 | 21,314 | 24,311 |
| **DELIVERIES.** | | | |
| Petroleum oil | 446,180 | 418,388 | 399,054 |
| Crude oil | 10,740 | 8,180 | 24,226 |
| Petroleum spirit | 17,929 | 19,684 | 20,205 |
| **STOCKS.** | | | |
| Petroleum oil | 164,606 | 155,395 | 149,504 |
| Crude oil | 5,629 | 4,360 | 9,201 |
| Petroleum spirit | 5,543 | 3,927 | 3,904 |

Stock account of Petroleum Oil in London, issued by the *Petroleum Association*, and compiled from returns made by the wharfingers, for the week ending Wednesday, Aug. 22:

| | Dudgeon's. | Palmer's. | Rowatt's. |
|---|---|---|---|
| Stock, Aug. 15, bbls | 8,078 | 30,167 | 7,015 |
| Landed, bbls | 1,000 | .... | 1,595 |
| Total, bbls | 9,078 | 30,167 | 8,610 |
| Delivered, bbls | 1,673 | 2,066 | 1,373 |
| Stock, Aug. 22, bbls | 7,405 | 28,101 | 7,237 |

| | St. Leonard's, | Thames Haven & Abbey Mills, | Totals |
|---|---|---|---|
| Stock, Aug. 15, bbls | 58,338 | 23,655 | 127,253 |
| Landed, bbls | 2,866 | 6,105 | 11,566 |
| Total, bbls | 61,204 | 29,760 | 138,819 |
| Delivered, bbls | 2,897 | 1,750 | 9,759 |
| Stock, Aug. 22, bbls | 57,307 | 28,010 | 129,060 |

Liverpool—An abatement of demand has been experienced this week, owing to buyers, as a rule, holding back a little, and sales have been of more moderate amount at barely previous rates: Refined Pennsylvanian at 6⅞d to 7⅜d, and Russian oil at 6¼d to 6½d per gal.; but towards the close a firmer tone has again been perceptible.—*London Grocer, Aug 25.*

## Recent Patents.

388,507. APPARATUS FOR BURNING HYDROCARBON OIL. Issued Aug. 28, 1888.

Claim.—1. In an improved apparatus for the combustion of hydrocarbon oils, the following elements: a casing with projecting lugs to receive supporting rods, and provided with graduated openings in the side walls thereof, whose diameters increase from the bottom upward, for the purpose described, an interior convex dispenser integral with the bottom, a foraminous removable top engaging with said casing, a retort of a heliciform character provided at its inlet with an annular chambered coupling suspending a vaporizing chamber, and further provided at its outlet with terminals diverging at right angles and perforated to emit vapor and to permit ignition of the same, means to uphold said retort, substantially as described, a nondestructible absorbent material surrounding said dispenser to accelerate the heating of said retort, and the threaded vertical rods and supporting base thereof, in conjunction with said projecting lugs, to regulate the position of said apparatus in the fire pot of the stove or furnace in which it may be employed, all arranged substantially in the manner and for the purpose specified.

2. In an apparatus for burning hydrocarbon oils, the casing forming the combustion-chamber; provided with graduated apertures for admitting air, and elongated enlarged apertures contiguous to its top, admitting a preponderance of warmer air, and the convex dispenser integral with the bottom, all arranged and combined to operate in conjunction with the retort provided with extended terminals is the orifices therein for the egress of vapor, the coupling connected to said retort, provided interiorly with a feed-duct, and exteriorly with a pendent vaporizer, and the feed-pipe establishing communication from the fuel-supply to said retort, substantially for the purpose and in the manner specified.

3. In an apparatus for the burning of hydrocarbon oils the combination, with the vaporized, the coupling provided with an annular space, to preserve a low temperature of oil, and adapted to receive the feed-pipe provided with a drip-duct, the retort, the perforated terminals thereto connected, and the supporting-bar combined to coach with the foraminous casing, provided integrally with a convex dispenser, two apertures, lugs and threaded graduating supporting-rods, and base, thereto united, substantially as and for the purpose set forth.

388,550. OIL-FILTER. Issued Aug. 28, 1888.

Claim.—1. In a filter, a can provided with a partition having one or more overflow-pipes, as specified, in combination with one or more filtering-pans mounted above said partition, substantially as described.

2. In a filter, the combination of a can with a pan, said pan being provided with an inner lower flange having openings, a ring and felt having openings adapted to register with the openings aforesaid, and bolts and nuts for engaging the parts, substantially as described.

3. In a filter, the combination of a can with a pan, said pan being provided with an inner lower flange having openings, rings, and felt or fabric, said rings and felt being provided with openings adapted to register with the openings aforesaid, and bolts and nuts for engaging the parts, substantially as described.

4. In a filter, a can provided with a sloping partition, having one or more overflow pipes, and a pipe, having a cock, and a pipe and cock, located below the partition, in combination with an upper and a lower filtering pan, both mounted above the partition, the upper pan being provided with a reticulated bottom, the lower pan having a felt or fabric bottom, substantially as described.

5. In a filter, a can provided with a sloping partition, having one or more overflow pipes, a pipe, located below the partition and connected therewith, as specified, side pipe, and bottom pipe, both communicating with the can below the partition, the pipes being provided with cocks, as specified, in combination with one or more filtering pans mounted above said partition, substantially as described.

6. In a filter, a can provided with a sloping partition, having one or more overflow pipes, a pipe, located below the partition and connected therewith, as specified, side pipe, and bottom pipe, the said pipes communicating with the can below the partition aforesaid, each of said pipes being provided with a cock, a glass gauge, connected at its lower end near the base of the lower compartment of the can and at its upper end with the upper compartment, in combination with a series of filtering pans mounted above the partition, substantially as described.

388,703. TREATING PLANTS CONTAINING INDICAN. Issued Aug. 28, 1888.

Claim—1. The method of manufacturing indigo, consisting in the introduction into the indigo-liquor during the process of manufacture of caustic ammonia, which combines with the indican of the plant under treatment and produces a product of superior quality, substantially as described.

2. The method of manufacturing indigo by introducing nitrate or nitrite of ammonia into the indigo-liquor during the process of manufacture to accelerate the action of alkalies on the indigo-liquor and to act on the gluten of the plant which is in solution, substantially as described.

3. The method of manufacturing indigo by introducing ammonia into the indigo-liquor and oxidizing the indigo-liquor during the process of manufacture, substantially as set forth.

4. The method of manufacturing indigo by introducing ammonia and atmospheric and ozonized air into the indigo-liquor during the process of manufacture, substantially as set forth.

5. The method of manufacturing indigo by introducing ammonia into the indigo-liquor and agitating, oxidizing, and ozonizing the indigo-liquor during the process of manufacture, substantially as set forth.

388,556. GLASS MOLD. Issued Aug. 28, 1888.

Claim.—1. In a mold, the hinged main body part and a two-part handle portion, the latter being provided with surfaces adapted to be locked in the hinged portion of the mold.

2. The combination, in a mold, of the duplex sliding plugs and a two-part handle portion interposed between the plugs.

## Imports of Empty Petroleum Barrels.

NEW YORK

3,798, G, Heye, Avonmore, Antwerp.
2,118, G. Heye, Lovely, Gottenburg.
5,390, G. Heye, A. J. Marshall, Rotterdam.
977, G. Heye, Jersey City, Bristol.
653, R. A. C. Smith, do. Alexander, Havanna.
3,400, S. Pitou, Lewis Smith, Antwerp.
62, E. Ping, Pahama, Havanna.
500, G. F. Laugh & Co., T. H. A. Pitt, Bermuda

PHILADELPHIA.

7,104, Chester Oil Co, J Friedrich, Trieste
2,688, Atlantic Refining Co, Ariadne, Stettin
3,457, Atlantic Refining Co, W Douglas, London
335, order, Bengore Head, Liverpool

## Imports and Exports.

Below we give a summary statement of the imports and exports of the United States for the twelve months ending June 30, 1888. We also give the same information for the corresponding period of 1887, in order that a comparison may be made between the two years The table is corrected to Aug. 3, 1888:

IMPORTS OF MERCHANDISE.

| FREE. | 1888. | 1887. |
|---|---|---|
| Asphaltum or bitumen, crude lbs | 81,346,914 | 55,105,035 |
| Alizarine, natural or artificial lbs | 2,454,243 | 2,095,212 |
| Argol, or crude tartar, and argol dust lbs | 17,226,491 | 22,024,768 |
| Barks, cinchona or other used in the manufacture of quinia lbs | 2,801,443 | 4,788,044 |
| Cochineal lbs | 181,495 | 492,304 |
| Logwood in sticks tons | 77,697 | 59,265 |
| All other dyewoods val | $136,204 | $284,741 |
| Gum, arabic lbs | 915,799 | 467,782 |
| Gum camphor, crude lbs | 2,779,719 | 2,857,222 |
| Cutch and gambier lbs | 36,896,670 | 25,598,212 |
| Shellac lbs | 4,206,850 | 4,722,538 |
| All other gums and gum resins lbs | 20,496,860 | 16,582,619 |
| Indigo lbs | 3,114,279 | 3,469,182 |
| Lime, chloride of or Bbleaching powder lbs | 95,318,471 | 103,087,827 |
| Licorice root lbs | 49,151,664 | 79,003,855 |
| Mineral waters, all not artificial gls | 1,800.803 | 1,834,411 |
| Potash, muriate of lbs | 56,065,179 | 38,569,814 |
| Quinia, sulphate of, salts of and cinchonidia oz | 1,628,414 | 2,753,962 |
| Soda, nitrate of lbs | 178,954,024 | 172,174,880 |
| Sulphur or brimstone, crude tons | 99,253 | 97,283 |
| Vanilla beans lbs | 145,379 | 137,439 |
| All other drugs, chemicals and dyes val | $4,035,470 | $3,355 714 |
| Corkwood, or cork-bark, unmanufactured val | $1,078,802 | $1,239,247 |
| Guano tons | 8,042 | 12,804 |
| Phosphates, crude or native, for fertilizing purposes tons | 19,317 | 26,552 |
| All other fertilizers val | $661,374 | $1,182,187 |
| Oils, fixed or expre'd lbs | 21,158,638 | 18,268,778 |
| Oils, volatile or essential lbs | 1,524,680 | 1,492,041 |
| Plaster of Paris, or sulphate of lime, unground tons | 133,606 | 146,933 |
| Plumbago cwt | 181,329 | 169,021 |
| Nutmegs lbs | 1,248,096 | 1,288,559 |
| Pepper lbs | 12,949,599 | 13,255,161 |
| All other spices lbs | 13,317,870 | 15,769,381 |
| DUTIABLE. | | |
| Bristles lbs | 1,114,214 | 1,196,242 |
| Brushes val | $639,146 | $548,516 |
| Cement bbls | 2,016,990 | 1,079,944 |
| Coal-tar colors & dyes val | $1,839,678 | $1,540,067 |
| Glycerine lbs | 10,000,719 | 12,765,072 |
| Logwood and other dyewoods, extract and decoctions of lbs | 2,391,377 | 3,396,467 |
| Opium, crude lbs | 447,920 | 568,263 |
| Potash, nitrate of, or saltpeter, crude lbs | 7,983,812 | 10,313,866 |
| Soda, bicarbonate of lbs | 2.020,643 | 2,548,580 |
| Soda, carbonate, including sal soda and soda ash lbs | 284,580,151 | 287,704,468 |
| Soda, caustic lbs | 89,321,467 | 84,689,458 |
| Soda, all other salts of lbs | 17,609,223 | 15,739,772 |
| Sumac, ground lbs | 13,456,563 | 16,127,445 |
| All other chemicals and drugs val | $3,800,278 | $3,399,726 |
| Clay of all kinds, including china clay or kaolin tons | 46,551 | 38,007 |
| Cosmetics, perfumery, &c val | $361,483 | $385,362 |
| *Glass and Glassware:* | | |
| Bottles, vials, demijohns, carboys and jars, empty or filled val | $815,562 | $739,240 |
| Cylinder, crown and common window, unpolished lb | 71,449,070 | 62,355,416 |
| Cylinder and crown, polished— Unsilvered sq. ft / Silvered sq. ft | 422,604 | 272,520 |
| Plate, fluted, rolled and rough sq. ft | 3,055,232 | 2,225,509 |
| Unsilvered sq. ft | 3,955,201 | 3,967,876 |
| Silvered sq. ft | 4,923,157 | 4,580,876 |
| All other glass and glassware val | $2,295,289 | $2,144,547 |
| Hops lb | 5,585,033 | 18,538,049 |
| Lead and manufactures of val | $668,705 | $699,282 |
| *Oils:* | | |
| Whale and fish gls | 242,450 | 174,278 |
| Other animal gls | 16,744 | 11,845 |
| Mineral gls | 377,713 | 290,535 |
| Olive gls | 654,036 | 744,766 |
| Other vegetable gls | 650,822 | 498,086 |
| Volatile or essential lbs | 602,421 | 122,266 |
| Paints and colors val | $1,244,320 | $1,214,283 |
| Seeds, linseed or flaxseed bush | 1,584,324 | 415,179 |
| Soap, fancy perfumed and all descriptions of toilet lbs | 615,878 | 461,600 |
| All other kinds soap val | $234,351 | $242,496 |
| Spices, ground lbs | 760,279 | 667,624 |
| Sponges val | $358,104 | $343,311 |

EXPORTS OF DOMESTIC MERCHANDISE.

| | | |
|---|---|---|
| Barks and extract of, for tanning val | $254,904 | $209,700 |
| Blacking val | $191,976 | $195,197 |
| Candles lbs | 1,502,179 | 1,859,370 |
| Acids val | $104,790 | $91,627 |
| Ashes, pot and pearl lbs | 512,563 | 889,592 |
| Dyes and dyestuffs val | $966,080 | $786,623 |
| Ginseng lbs | 309,964 | 330,831 |
| Medicines, patent or proprietary val | $1,545,514 | $1,447,067 |
| Roots, herbs and barks, n. e. s val | $137,756 | $145,113 |
| All other chemicals, dyes and medicines val | $2,194,531 | $2,145,285 |
| Perfumery and cosmetics val | $391,866 | $322,059 |
| Fertilizers tons | 194,149 | 220,792 |
| Window glass val | $11,022 | $15,955 |
| All other glass val | $870,606 | $867,249 |
| Glucose or grape sugar lbs | 6,263,751 | 4,476,931 |
| Glue lbs | 356,899 | 275,382 |
| Grease, grease scraps, and all soap stock val | $924,777 | $849,908 |
| Gunpowder lbs | 907,991 | 474,477 |
| All other explosives val | $525,270 | $490,904 |
| Hops lbs | 6,792,943 | 260,721 |
| Lead and manufactures | $129,558 | $141,104 |
| Matches val | $72,071 | $77,379 |
| Rosin bbls | 1,490,314 | 1,365,012 |
| Tar bbls | 20,306 | 20,471 |
| Turpentine & pitch bbls | 20,778 | 14,245 |
| Oil cake and oil-cake meal lbs | 562,744,209 | 622,295,233 |
| *Oils.* | | |
| Lard gls | 931,616 | 975,163 |
| Sperm gls | 136,092 | 157,169 |
| Whale and fish gls | 1,360,399 | 1,348,804 |
| Other animal gls | 617,801 | 570,376 |
| Mineral, crude (including all natural oils, without regard to gravity) gls | 85,598,725 | 76,062,878 |
| Mineral, refined or manufactured naphthas (including all lighter products of distillation) gls | 12,066,921 | 15,735,239 |
| Illuminating gls | 456,427,221 | 480,845,811 |
| Lubricating and heavy paraffine oil gls | 22,889,529 | 16,910,513 |
| Residuum (including tar, and all others, from which the light bodies have been distilled) bbs | 32,601 | 77,353 |
| Cottonseed gls | 4,458,597 | 4,067,138 |
| Linseed dls | 92,134 | 119,840 |
| Volatile or essential val | $325,100 | $309,460 |
| Other vegetable oils val | $56,890 | $65,689 |
| Paraffine and paraffine wax lbs | 36,005,522 | 31,546,223 |
| ints and painters' colors val | $492,799 | $452,388 |
| Tallow lbs | 92,483,052 | 63.278,403 |
| Oleomargarine oil lbs | 30,146,595 | 4o,712,985 |
| Quicksilver lbs | 1,032,852 | 514,210 |
| Cottonseed lbs | 5,918,555 | 11,232,141 |
| Soap, toilet or fancy val | $59,496 | $57,751 |
| Soap, all others lbs | 18,901,768 | 19,682,466 |
| Spermaceti and spermaceti wax lbs | 226,576 | 336,222 |
| Spices, ground or prepared val | $36,270 | $42,112 |
| Alcohol proof gls | 329,317 | 1,264,513 |
| Spirits turpentine gls | 10,585,942 | 10,209,883 |
| Starch lbs | 5,755,806 | 7,408,386 |
| Varnish gls | 143,926 | 96,427 |
| Wax, bees' lbs | 78,070 | 90,350 |
| Whalebone lbs | 318,056 | 173,452 |

EXPORTS OF FOREIGN MERCHANDISE.

| FREE OF DUTY. | | |
|---|---|---|
| Alizarine, natural or artificial lb | ..... | ..... |
| Argol, or crude tartar, and argol dust lb | ..... | ... |
| Barks — Cinchona, or other used in the manufacture of quinia lb | 2,712 | 5,252 |
| Cochineal lb | ..... | 606 |
| Logwood tons | 90 | 1 |
| All other dyewoods in sticks val | ..... | $219 |
| Gum Arabic lb | 1,832 | 17,597 |
| Gum camphor, crude lb | 22,197 | 320 |
| Gum cutch and gambier lb | 25,283 | 35,123 |
| Gum shellac lb | 513 | 2,248 |
| All other gums and gum-resins lb | 195,907 | 169,370 |
| Indigo lb | 2,470 | 20,038 |
| Lime, chloride of, or bleaching powder lb | 15,000 | 11,611 |
| Mineral waters, all not artificial gls | 2,534 | 597 |
| Quinia, sulphate of, salts of, and cinchonidia oz | 5,098 | 162 |
| Soda, nitrate of lb | 770,745 | 5,968,003 |
| Sulphur, or brimstone, crude tons | 4 | 20 |
| Vanilla beans lb | 11,281 | 1,568 |
| All other chemical and drugs val | $230,023 | $213,406 |
| Guano tons | 3 | ..... |
| All other fertilizers val | $325 | $1,041 |
| Oils, fixed or expressed lbs | 1,640,143 | 3,931,446 |
| Oils, volatile or essential lbs | 11,062 | 3,059 |
| Plumbago cwts | 450 | ..... |
| Nutmegs lbs | 9,560 | 5,497 |
| Pepper lbs | 665,468 | 479,752 |
| All other spices lbs | 791,322 | 1,286,654 |
| SUBJECT TO DUTY. | | |
| Brushes val | $658 | $79 |
| Cement bbls | 8,925 | 12,749 |
| Coal tar colors and dyes val | $15,059 | $22,837 |
| Glycerine lbs | 49,142 | 21, |

THESE TWO BRANDS OF

# LUBRICATING OIL

Are the Best

AND MOST POPULAR

In the Market.

Have been endorsed by hundreds of the largest consumers and recommended by the leading Engine Builders in the Country.

## STANDARD OIL COMPANY,

**CLEVELAND, OHIO.**

---

THE

DOMESTIC TRADE DEPARTMENT

OF THE

## ATLANTIC REFINING CO.

OFFICE, 125 ARCH ST., PHILADELPHIA.

# CONTINENTAL AND "WESTMINSTER"

150 FIRE TEST.
WATER WHITE.

"ATLANTIC"
In convenient cans, each furnished with a nozzle.

# OILS.

Sole Manufacturers of the Celebrated Brands

## "OPTIMUS" (A) and (O) LUBRICATING OILS.

For Car Boxes and Heavy Journals.

CASOLINES all Gravities from 62° to 105°. Orders will receive prompt attention.

# NAVAL STORES.

Having representatives in the primary markets, we will be glad to name prices for

## SPIRITS TURPENTINE

AND ALL GRADES OF

## ROSINS

Delivered in any of the Southern and Western Markets.

## STANDARD OIL COMPANY,

LOUISVILLE, KY.

---

# WATERS PIERCE OIL CO.,

REFINERS OF

# PETROLEUM.

Manufacturers of CAR and AXLE GREASE.

PRINCIPAL OFFICE,

## No. 600 North Fourth St., St. Louis, Mo., U.S.A.

*Depots in all Towns in the SOUTHWEST and OLD MEXICO.*

---

# The Standard Lubricating Oil of America

FOR RAILROADS

## Galena Engine, Coach and Car Oil

Gravity 26°, 27°, 28°, 29°; Cold Test, 10° to 15° deg. below zero.

No freezing in coldest weather, and entire freedom from hot journals at any time; perfect uniformity at all seasons of the year. Saves forty per cent. in wear of brasses, as its exclusive use upon a majority of the leading railroads has demonstrated.

SHOWING BETTER RESULTS THAN ANY OIL EXTANT.

REFERENCE FURNISHED ON APPLICATION.

## GALENA OIL WORKS, Limited

CHAS. MILLER,
Pres't and Gen'l Manager.

FRANKLIN PA.

# THE CHIEF TROUBLE WITH OIL

that does not burn satisfactorily is that the lamp wick is made from short, irregular staple, is poorly woven or is full of foreign substances. A wick having one or more of these faults has a low capillarity to begin with, and after short service begins to clog in the burner and char at the top causing a dim, smoky flame from the best refined oil. Since, however,

## THE AMERICAN WICK

has been introduced this fruitful source of annoyance and dissatisfaction has been largely done away with and there is now no excuse for the trade's selling poor wicks or for consumers' accepting them. It is made from pure, long staple cotton, is woven with absolute uniformity and is chemically treated during the process of manufacture in a way to remove the last vestige of foreign substances. The result is a ***PERFECT WICK*** which is now sold and recommended by the very houses--the lamp, burner and oil dealers--whose interests compel them to recommend the best wick made.

We make wicks for every style of burner in the market. For samples, prices and all information, address

## AMERICAN WICK M'F'G CO.

JOHN DOUD, General Manager, ***26 BROADWAY, NEW YORK.***

# POPULAR SPECIALTIES

Wide awake Jobbers and retailers realize that there are certain commodities that become standards in consequence of their increasing popularity year after year. Not because they are forced upon the trade, but on account of their intrinsic worth. It is the keen tradesman that caters to this established demand instead of taking advantage of the consumer by palming off on him some cheap imitation. The former course is a practical protection of commercial relations, while the latter destroys confidence and injures trade. Practical experience of nearly a quarter of a century has taught the shrewd consumer that there is no better leather preservative known to the trade than ***VACUUM HARNESS OIL.*** The peculiar process and care in manufacture, secures a uniformly good article. It penetrates the leather, making it soft and pliable. giving double wear to Harness, Carriage Top, Shoes, etc. Some people, however, will count the first cost and for this trade is the ***FAVORITE HARNESS OIL*** of the same grade, only a little less in quality at "way down" prices. The only satisfactory cheap oil. Another essential to every well regulated stable; almost as indispensable as hay; is the ***VACUUM HOOF OIL;*** a peculiarly penetrating and searching salve. Horsemen know it is the great remedy for Sores, Wounds, Galls, Sprains, Quarter Crack. These goods are offered to the trade at discounts that pay for handling, and on liberal credit. Send for prices and other information to

**Address VACUUM OIL CO., Rochester, N. Y., or**

No. 45 Purchase St., Boston Mass.
No. 44 Gay's Building, St. Louis.
No. 17 Commercial Gaz. B'd'g., Cincinnati.
The Albany, Liverpool, Eng.

No. 208 Home Insurance Building, Chicago.
No. 216½ Wash. Ave. So., Minneapolis.
No. 231 Smith's Wharf, Baltimore.
No. 138 St. James St., Montreal

No. 96 Water St., New York.
No. 305 Walnut St., Philadelphia.
No. 150 First Ave., Pittsburg, Pa.
No. 96 King St. West, Toronto.

## McILVAINE BROTHERS,
PHILADELPHIA,

# Drug Millers & Importers,

Offer to the Wholesale and Jobbing Trade. Drugs of our own powdering and guaranteed Selection and Purity.

| | | | |
|---|---|---|---|
| Assafœtida, | Soap, | Insect Flowers, | Orris Root |
| Alum, | Cubebs, | Gum Arabics, | Hellebore |
| Aloes, | Gentian, | Camboge, | &c. &c. |

IN BARRELS, BOXES, &c.

East India Plumbago, German Lead,
—AND—
ALL GRADES OF PUMICE STONE.
CORRESPONDENCE SOLICITED.

## Olive Oils and Castile Soaps,
LIEBMAN & BUTLER,
58 Stone Street, NEW YORK.

## MERZ CAPSULES.
Reduction in Price.
1000 Merz Improved Empty Capsules in Lacquered Metal Can, 65c.
500 Hard Filled Capsules in Lacquered Metal Can:
Copaiba Para .....40c per hundred.
Copaiba and Oleoresin Cubebs .....50c " "
Merz Compound Sandalwood.....75c " "
OVER 100 STANDARD FORMULAS IN HARD AND SOFT FILLED.
LARGE QUANTITIES IN BULK A SPECIALTY
Liberal Discount to Jobbers. Same Uniform Reduction in Boxed Goods.
Send for Price List. The Merz Capsule Co., Detroit, Mich.

## LANOLINE LIEBREICH
(PATENTED.)
The New Base for Salves and Ointments, is of White Color and Perfectly Odorless; for Burns, Wounds and all Skin Diseases. Has valuable antiseptic properties.
MANUFACTURED BY
Messrs. Benno-Jaffe & Darmstædter, Martinikenfelde, Germany.
For Sale by LUTZ & MOVIUS, NEW YORK.
SOLE AGENTS FOR U. S.

## ROGERS & PYATT,
IMPORTERS,
78 & 80 Maiden Lane, New York.
Shellac, all grades. Verdigris, Pods, Granulated and Powdered.
Carbolic Acid, Cudbear.
Powd. Nit. Strontia, Madder,
Powd. Nit. Barium, Red Argols,
Gum Sandarac, Gum Senegal.
MANUFACTURERS OF BLEACHED SHELLAC, BEST QUALITY

H.W.J.
DIAMOND BRAND.
# TEREBENE.
Water White. Inactive.
The only reliable test of the purity of terebene is its perfect inactivity to polarized light. Careful examination of different brands now on the market has shown our preparation to be the only one free from turpentine. All other samples containing from 5 to 50 per cent.
We use only the best unadulterated oil of turpentine and careful tests are made with the polariscope during the whole process of manufacture.
The H. W. Jayne Chemical Co.,
Frankford, PHILA.

## W.H. BOWDLEAR & CO.
BLEACHERS AND REFINERS
OF THE "W. H. B." BRAND OF
BEESWAX.
IMPORTERS OF
Carnauba or Brazil Wax, Refined Paraffine Wax, and
CERESINE OR MINERAL WAX.
36 Central Wharf, Boston, U. S. A.

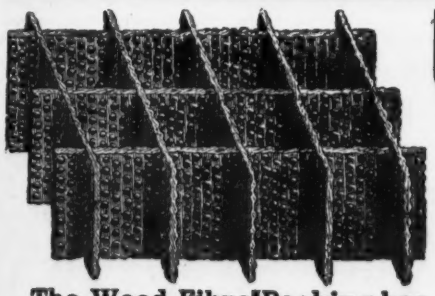
# GUM SHELLAC
ALL GRADES.
HOWE & FRENCH, - - BOSTON.

CHAS. T. WHITE. NORMAN WHITE.
CHAS. T. WHITE & SON,
MANUFACTURERS' AGENTS AND BROKERS,
Chemicals, Drugs, Oils & Spices,
96 & 98 MAIDEN LANE, NEW YORK.
Sole Agents for the ALUMINIUM UND MAGNESIUM FABRIK, PATENT GRATZEL *BREMEN, GERMANY.*

## BAUXITE
(Hydrate of Alumina-Alum Clay)
LUMP AND GROUND.
IRISH HILL BRAND.
Highest in Alumina, and Lowest in Iron produced
Best article wherefrom to Manufacture
Alum, Sulphate of Alumina, Alum Cake, &c.
Mines & Mills, Nr. BELFAST & LARNE.
THE BAUXITE CO., Limited,
SOLE AGENT, PROPRIETORS
GEO. G. BLACKWELL 26 CHAPEL ST., LIVERPOOL, ENG

THE STANDARD BRANDS FOR YEARS.
# BAKER'S CASTOR OIL, "Crystal," "A.A." & No. 3.
H. J. BAKER & BRO., 215 Pearl Street, NEW YORK.

SPECIALTIES.
## GLASS BOTTLES & GLASSWARE SUNDRIES,
Show Bottles, Tubes, Jars, &c. for Exhibitions.
BREFFIT'S AIRE & CALDER BOTTLE CO., Ld., London, England.
J. W. BINNEY, Sole Agent for the U. S.
227 Pearl Street, NEW YORK



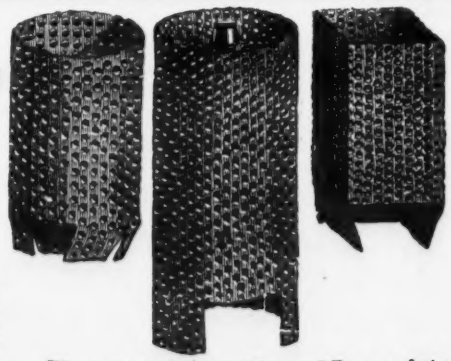
The Wood Fibre Packing has been used by some of the largest shippers in the U. S. Sent all over the world and not a single complaint of breakage has been reported. It is absolutely safe.

Samples and prices furnished upon application.

## U. S. Bottle Packing Co.
Sole Manufacturers under U. S. Patents of the
ELASTIC WOOD FIBRE PAPER
For Packing Bottled Merchandise, Tiles, and all Fragile Articles.

Put up in any shape desired by the packer or sold by the yard or roll. In plain cylinder with a sheet for the top and bottom of the box. In sewed wrappers with flexible bottoms. In cartons. In rack cases to fit a packing box. In self-sealing wrappers, neatly folded in a heet or wrapping paper for single packages.

All correspondence address to
15 Jav Street, NEW YORK.
BOSTON OFFICE: 99 Milk Street.
CINCINNATI OFFICE: 165 Walnut Ave.



The special attention of Druggists and all packers of bottled goods and fragile articles is called to this packing.

It is neat, clean, compact, and saves from 30 to 50 per cent on cost of freight.

Sample cases fitted up without expense to owners.

## DRUG MARKET.

**Note**—*Our prices are for large lots except when otherwise specified, and buyers of small quantities must expect to pay an advance on these figures.*

*The prices current will be found on pages 49 and 50.*

TUESDAY EVENING, Sept. 4, 1888.

The volume of business shows a steady and important increase, while all along the line a hardening of values is noticeable. In some lines the advance in prices has been marked, though in the majority of cases there has as yet been no actual change. The following represent the changes of most importance occurring within the week:

| ADVANCED. | DECLINED. |
|---|---|
| Cuttle bone. | Balsam fir. |
| Musk | |
| Strontia Nitrate. | |
| Quicksilver. | |
| Tamarinds. | |
| Balsam tolu. | |
| Saffron. | |
| Oil Cloves. | |
| Oil Sassafras. | |
| Gum Guiac. | |
| Gum Mastic. | |
| Gum Senegal. | |
| Celery seed. | |
| Shellac. | |
| Cloves. | |

### Opium.

A better feeling is observable in the opium market. It is intimated that considerable business has been done in a quiet way, but we have been unable to confirm this. Advices from the other side are of such a strong character that even those most bearishly inclined are unable to reconcile them with the ideas of a large crop and all that that entails. The bullish element contends that while the crop may amount to 7,000 cases it is not likely to exceed 5,000, a large proportion of which is weak and watery and not up to the requirements of trade. However this may be there seems to be a strong bull movement going on in Smyrna, where prices have reached 8s 3d@8s 9d for good quality and 7s 5d for low grades under the stimulus of speculative buying. Mail advices from London report a better inquiry at a slight advance. On the spot the transactions which have come to the surface have been at the range of $2 70@2 75, mostly single cases for the account of out of town buyers. In a jobbing way business is being done at $2 80@2 90, according to quantity and seller.

### Quinine

Since we last wrote a firmer feeling has developed in the quinine market as the result of the strong tone apparent at the London and Amsterdam bark auctions. While this feeling has not developed into an actual advance in values, there is less pressure to sell at 33c than heretofore, although that price is still nominally quoted for lots in large bulk. To-day the firmness here was emphasized by cable advices of an advance in London, and at the close there appeared to be more buyers than sellers, though the demand could not be called brisk. Messrs. Schroeter & Co. inform us by cable that the unit at the Amsterdam bark sale on Thursday last was 11c, Dutch money.

| | |
|---|---|
| Receipts of quinine for the week..... | 17,000 |
| Since Jan. 1..... | 1,171,2 0 |
| Corresponding period last year..... | 1,515,100 |

### Miscellaneous.

Alcohol is without particular interest. There is a good jobbing demand, and prices are unchanged at 2 20@2 22c.

Cuttlefish bone is higher. There has been a brisk demand, resulting in sales of 50 straps at 20@21½c, and the market closes firm with 21½@22c generally demanded.

Citric acid is reported to be in active jobbing request and prices are well maintained at 50@51c.

Borax is a shade higher and in no more demand. We quote city refined at 8⅛@8⅝c and California at 8¼@8⅜c.

Ergot is still weak and depressed, receiving little or no attention from buyers. German is nominally quoted at 21@22c and Spanish at 24@26c, but large buyers could no doubt do better.

Insect powder continues to sell freely and remains firm in price. There have been no further developments regarding Hungarian daisies.

Lycopodium is receiving more attention, owing to the requirements of fireworks manufacturers to meet the demands caused by the political campaign. The market is firmer but not quotably higher, the range being 38½@40c as to quantity and holder.

Nitrate of strontia is also active and higher for the same reason mentioned in connection with lycopodium. Since we last wrote there have been reported sales aggregating 6,000 lbs. at 9¼@9¾c and now 9¾@10c is demanded.

Quicksilver is higher in sympathy with London, where the price in outside hands has advanced to £8 5s. On the spot some holders are asking 60c, but 56@57c will be accepted by others. The demand here shows no increase.

Tamarinds are very scarce. Owing to the low prices prevailing last year, the crop this year was allowed to rot on the trees, it is said. The little that found its way to this market arrived in barrels, and sold for a time at 6c per lb, but the limited quantity now remaining is held at 8c.


**SALOL.**

The new remedy for Rheumatism and Rheumatic Affections, Diarrhœa, Dysentery, Typhoid Fever, etc. Manufactured by Dr. F. VON HEYDEN'S Successor at Radebeul-Dresden.

**PHENACETINE-BAYER**

The New Antipyretic.

(PARA-ACETPHENETIDINE)

$C_6H_4 \diagdown \begin{matrix} O.C_2H_5 \\ NH\ (CO—CH_3) \end{matrix}$

Manufactured by the

**Farbenfabriken vorm. Friedr. Bayer & Co., ELBERFELD.**

This new antipyretic and antineuralgic is attracting considerable attention here and in Europe, and experiments so far made go to show that while it compares favorably with other antipyretics it is free from their deleterious effects.

**SULFONAL—BAYER.**

The New Hypnotic,

Manufactured by the

**Farbenfabriken vorm. Friedr. Bayer & Co., ELBERFELD.**

We beg to advise the trade that we are Sole Licensees and Sole Agents for the United States for the above Chemicals, and we will be pleased to furnish quotations on application.

**W. H. Schieffelin & Co.,**

170 & 172 William St., NEW YORK.

**NEW YORK Quinine and Chemical Works** LIMITED

Office. 114 William St., New York.

MANUFACTURERS OF

QUININE, ALOIN MORPHINE SANTONINE. COCAINE.

**McKesson & Robbins,**

**IMPORTED BAY RUM.**

We offer this article of our own direct importation, made expressly for us from a standard sample, hence a uniformity in odor and general characteristics. Original puncheons and barrels. Proof never below 108°. Prices and Samples on application.

**ROSENGARTEN & SONS,** 12 Gold Street New York.

**MANUFACTURING CHEMISTS, Philadelphia.**

| | | |
|---|---|---|
| Sulphate of Quinine, | Bromide of Potassium, | Hypophosphites, |
| Muriate of Quinine, | Nitrate of Silver, | Subnitrate of Bismuth, |
| Citrate of Iron and Quinine, | Iodide of Potassium, | Spirits of Nitre, |
| Sulphate of Cinchonine, | Sulphate of Morphine, | C. P. Acids, |
| Sulphate of Cinchonidine, | Acetate of Morphine, | Tannin, |
| Sulphate of Quinidine, | Muriate of Morphine, | Resublimed Iodine, |
| Bromide of Ammonium, | Nitrate of Ammonia, | Ether. |

**C. F BOEHRINGER & SOEHNE,**

**MANUFACTURING CHEMISTS.**

Mannheim, Germany, and 49 Cedar Street, New York

**QUININE.**

| | | |
|---|---|---|
| Quinidia, | Codeine, | Resin Jalap, |
| Cinchonidia, | Digitalin, | Salicin, |
| Cinchonia, | Ergotin, | Spartein, |
| Chinoidine, | Koussein, | Strophanthin, |
| Acetanilid, | Morphine, | Strophanthi Tinct. |
| Aconitia, | Papain, | Terpinhydrat, |
| Arbutin, | Pelletierin, | Terpinol, |
| Atropia, | Pilocarpin, | Urethan, |
| Caffein, | Physostigmin, | Veratrin, |
| Cocaine, | | |

**IODOL**

(THE IODIDE OF PYRROL),

The New Antiseptic, Replacing Iodoform.

**E. MERCK,** Manufacturing Chemist,

Sole Licensee for the United States.

No 73 William Street - - - - - NEW YORK.

**HOFMANN & SCHOETENSACK,** - - - Ludwigshafen-on-Rhein.

MANUFACTURERS OF:—

Acetanilid, Borate Manganese, Benzoic Acid ex Toluol,
Ess. Oil Almonds, Sulphate Zinc, Potash Permang.
Chrome Alum, Naphthaline for Moths.

Agents in United States: SCHOELLKOPF, HARTFORD & MACLAGAN, Ltd.
3 Cedar Street, NEW YORK.

**SOZIO & ANDRIOLI,**

Grasse, France.

MANUFACTURERS OF

**Pomades and Materials for Perfumery**

DISTILLERS OF

**ESSENTIAL OILS,**

ROSE AND ORANGE FLOWER WATERS.

SOLE AGENTS IN THE UNITED STATES AND CANADA.

**LIEBMAN & BUTLER NEW YORK**

Works at Feuerbach established by FRIDR. JOBST —1806.— | Branch house at Milan "SUCCESSORI DI FRIDR. JOBST." | Works at Sachsenhausen established by C. ZIMMER —1837.—

Vereinigte Fabriken chemisch-pharmaceutischer Producte Feuerbach-Stuttgart & Frankfurt a. M.

Frankfort a/M. **ZIMMER & CO.** GERMANY.

Offer to the trade their strictly prime

**QUININE**

on spot and for future delivery, in quantities to suit at lowest market quotations.

Represented by RICHARDSON DRUG CO., St. Louis, Mo.

JOHNSON & JOHNSON, 28 Cedar St., New York.

ALL kinds of Wax, Honey, (Branch of Dryden & Palmers) Rock Candy, D & P. " " Syrup, Sugar Coloring, &c. F. G. Strohmeyer & Co 122 Water St., N. Y.

**OLEUM OVI, or, OIL of EGG**

A Positive Cure for Piles.

Sold by CHAS. N. CRITTENTON, 115 Fulton St., New York, and SMITH, KLINE & CO., Philadelphia, Pa.

or sent to Jobbers address on receipt of $4.00 per doz. Correspondence Solicited.

**Chas. W. Sitterly,** Sole Proprietor, Box 14, Guilderland, N. Y.

**F. E. McALLISTER,**

**Seed Merchant and Importer**

No. 22 Dey St., New York.

Canary, Rape and Hemp Seed, Mocking Bird Food, Mixed Bird Seed in cases, Bird Gravel, &c.

Established 1836.

**Croton Laboratory**

OFFICE, 26 CEDAR ST., N. Y.

**J. B. Hendrickson**

IMPORTER AND REFINER OF

Crude Saltpetre and Nitrate of Soda.

Best qualities always on hand at lowest cash price.

**Polar Star Norwegian Cod Liver Oil,**

NON-FREEZABLE.

Special price for barrel lots ordered before September 15th. Send for sample.

**FRENCH, RICHARDS & Co.**

Philadelphia, Pa.

**Bermuda Ochre.**

Single Washed.
Double Washed,
Extra Floated

Fully equal to ROCHELLE.

BERMUDA OCHRE TRADE MARK C&C

CRIDLEY & CO. Sole Agents of the BERMUDA OCHRE CO., 87 Maiden Lane, New York

Druggists' Pure Spices

**E. W. ROPES,**

New York City

Prices furnished cheerfully.

**JOHN J. THOMSEN,**

W. Balto. and 66 & 68 German Sts.

P. BALTIMORE, MD.,

IMPORTER AND EXPORTER OF

**DRUGS!**

AMERICAN INDIGENOUS

OILS, ROOTS, BARKS, HERBS

A SPECIALTY.

Haarlem oil is still tending downward, and $1 75 is now quoted for S. & F.

Musk has advanced to $25@26 for Tonquin pod and $38@40 for true grain. Sales of 5.0 ozs are reported on private terms.

### Balsams.

For balsam copaiba the demand is restricted by the views of the holders and the limited supply. The nominal quotations are 55@60c for Central American, 64@65c for Para, and 62½c for Maranham. Canada balsam fir, owing to the uncertainty regarding the extent of the new crop has been without important business so far. The new crop is now beginning to come in, and is offered to arrive at $2 40. On the spot, in a jobbing way, $2 50 is asked. Oregon is scarce on the spot and held at $1 10@1 25, but stock to arrive can be had at 90c. Balsam tolu is not now obtainable below 35c and is offered sparingly. As this price is above buyers' views, no business of consequence is reported.

### Essential Oils.

There are comparatively few changes to note in this department. Dealers report a very good trade in jobbing quantities for most of the articles on the list and anticipate an active business later on. Clove oil, sympathizing with the spice, has advanced sharply during the week, the upward movement being accompanied with an active demand. Sales of about 5,000 lbs are reported at $1 30@1 35, the market closing with $1 40@1 45 demanded for oil made from the clove buds.

Peppermint oil was unsettled during most of the week but to-day a firmer feeling was observable, the persistent reports of a short crop apparently beginning to have an effect. Another element of strength was said to be a large inquiry from the other side. Up to the close, prices had not been quotably affected.

Sassafras oil is difficult to quote, as the stock here is extremely light; 60c represents the lowest views of holders, but this is above buyers' ideas, and so far as we can learn there is nothing selling.

### Flowers.

In most descriptions there is a moderate jobbing demand at the former range of values. Spanish saffron has again advanced, owing to continuous rains in the growing districts. For Valencia £15@16 is now demanded, and Alicante is held at $10. Of the former 100 lbs. sold before the advance at $12 50@13. American saffron is also stiffening up, after a long period of neglect. All the cheap sellers have withdrawn from the market, and now 14c is generally demanded.

### Gums.

There has been a moderate demand for most of the articles on the list, and prices generally are well supported. Guiac is extremely scarce on the spot, the arrivals this season having been the smallest for the past ten years. Holders now demand 26@28c for the better kinds and 22@24c for low grades. Gamboge has been in active request and all the cheap lots, aggregating 4,000 pounds, having been taken up the market is higher, 52½@55c being now quoted. Mastic has received more attention of late, on account of the requirements of a new preparation that is being made from it. Most of the stock here has been cleared up, and for what remains 82½@85c is demanded. Gum senegal is advancing under the stimulus of an increased demand and the strong position abroad. Sales of 100 bales picked are reported on private terms, the revised quotations being 43@49c for sorts and 50@53c for picked gum. Tragacanths are higher in London and firmer here, but without quotable change. There is talk in London of crop failures, but this is not confirmed by a ny advices at hand.

### Herbs and Leaves.

Business is improving in this department but as a rule sales do not exceed jobbing lots. The spot stock of Tinnivelly senna is practically exhausted. New crop from London will be here about the 15th, but the market for it is expected to open at comparatively high prices. Alexandria sennas are getting to be extremely scarce here, in London, and in Cairo. What the trade has been using for the past two or three years is said to have been the accumulations of earlier crops, and these have now been about used up. Future supplies are very uncertain and the article may ultimately get into the same position as gum arabic.

### Roots.

There is nothing particularly new in this department. Prices throughout are firm and we have no special changes to report.

### Seeds.

Business improves slowly in sympathy with other lines, but there is no special activity, if we except celery seed the spot stock of which has been bought up and is now held at 10½@11c. The reported sales aggregate 25 bgs. German rape seed still has an upward tendency and star anise shows a further slight advance.

### Shellac.

The firmness and upward tendency of the market for shellac has been emphasized during the past week, but it has not been attended with the activity previously noted. However, there has been a very good demand, particularly from the jobbing branch of the trade, and we hear of sales of 400 cases various marks, at full prices, including 75 cs D. C. Cables from Calcutta report a further advance of 1c there, and at to-day's sale in London there was an advance of 2s on second orange grade. There are said to be orders in this market for both blocked and free D C, which cannot be filled, as the buyers have fixed their limit too low. Prices throughout the list are higher than when we last wrote, and the close was strong with the tendency still upward.

### Spices.

The jobbing demand continues good, but large lots are neglected, as the principal buyers continue to order direct from Europe. Cassia buds have advanced in China, and are firmer but no higher here. All grades of cassia are firmer. Cloves have advanced sharply and are still tending upward.

## More About the Peppermint Crop.

LYONS, N. Y., Sept. 1, 1888.

*Editor* OIL, PAINT AND DRUG REPORTER:

In addition to the reports in your last issue, of 27 crops of oil of peppermint yielding an average of less than 7 pounds per acre, we have to report the names of the growers of 21 crops, the yield last year, and the yield on the same lands this year—it being the 2 years crop which ordinarily produces in the 2 years as many pounds of oil of peppermedt as the first year. There is no 3 year crop as has been stated. There has never been such a failure of the growing crops of this importrnt article. This, with the unprecedented small planting this Spring, owing to the starvation prices at the time of planting discouraging the producers will no doubt make the yield less than one-quarter of an ordinary crop.

Following are the reports received from August 30 to September 1st inclusive, together with the names and locations of the farmers:

| Fairville. | No. acres. | Production.—This year. Lbs. | Last year. Lbs. |
|---|---|---|---|
| H. M. Sams | 2 | 18 | 52 |
| M. Brier Sodus. | 3 | 22 | 68 |
| Chas. Segor | 4 | 16 | 88 |
| M. B. McIntyre | 1¼ | 5 | 28 |
| Benj. Storms | 4 | 13 | 104 |
| William Gilkey | 1 | 4 | 30 |
| Jas. Gilkey Lyons. | 1 | 3 | 24 |
| Fred'k Bramer | 5 | 13 | 86 |
| Geo. Brown | 7 | 26 | 115 |
| Albert Lee | 9 | 10 | 198 |
| Peter Cole | 2¾ | 30 | 78 |
| V. Gootman | 2 | 14 | 45 |
| C Mitchell | 10 | 50 | 216 |
| Philip Gantz | 27 | 100 | 886 |
| Timothy Collins | 6 | 7 | 120 |
| Theo. Bartram | 1¾ | 8 | 35 |
| Judd Bradley Galen. | 4 | 18 | 80 |
| John Clows Marion. | 1 | 2½ | 22 |
| F. Peck | 5 | 28 | 180 |
| Totals | 96½ | 447½ | 2,435 |

This leaves a shortage of 1,987½ lbs in this year's yield compared with the crop obtained from the same land last year. The average


# JOHN SOFIO & CO.'S Essential S Oils.

MANUFACTURERS OF

**Lemon, Bergamot AND Orange.**

The quality is uniform and guaranteed absolutely Pure. Samples and Quotations furnished on application to

**THOMAS LEEMING & CO., 18 College Place, New York.**

**Sole Agents for United States and Canada.**

# Charras Essential Oils.

**CLAYTON ROCKHILL,**

**COMMISSION MERCHANT,**

**30 PLATT STREET, NEW YORK**

SOLE AGENT IN THE UNITED STATES FOR

**CHARRAS & CO., Nyons Drome, France**

## Crude, Powdered, Ground AND Crushed

# DRUGS

## R. HILLIER'S SON COMPANY,

*IMPORTERS and DRUG MILLERS,*

**46 CEDAR STREET, NEW YORK.**

# MEXICAN VANILLA.

## TYLER & FINCH,

**54 Cedar St., NEW YORK,**

**Offer choice selections from the best stocks of the best curers in Mexico, including every quality from the cheapest to the finest of the crop.**

**Packages of any size made up for safe shipment to any part of the world.**

***Pyrethrum Cinerariæfolium.***

**B. W. B. & CO.**

***Powdered***

***Dalmatian Insect Flowers.***

Insect Powder is valueless unless **Pure** and Ground from prime Flowers. The above brand has been in the market since 1853. Its excellent quality has been maintained since its introduction and at present it is recognized by the trade as unexcelled. Besides its superior quality its fineness recommends it, being ground more finely than others.

We offer only one kind pure, uncolored.

Sample and quotations on application.

**CODMAN & HALL,**

**125 Milk Street, BOSTON.**

1833. 1888.

## CHAS. W. LOCAN'S

# CHOICE FLAVORING EXTRACTS.

***VANILLA, LEMON, &c.***

**Cheap** because **Pure** and **Strong.**

PRICES AND SAMPLES ON APPLICATION.

**E. & S. FREY, Baltimore, U. S. A.**

# Vanilla Beans!

**we are accused of "bearing" the market in order to reduce prices in Mexico. If this be so, our warehouse should be the place to secure bargains.**

## DODGE & OLCOTT,

***Curers. Importers. First Hands.***

**86 & 88 William Street, NEW YORK.**

# MEXICAN VANILLA BEANS

**High Gravity Essential Oils of the Finest Quality.**

## CHARLES E. HIRES, RECEIVER and IMPORTER.

**117 & 119 Arch Street,**

PHILADELPHIA, U. S. A.

# SEEDS

**THE ALBERT DICKINSON CO.**

Dealers in Timothy, Clover, Hungarian, Millet, Red Top, Blue Grass, Lawn Grass, Orchard Grass, Pop Corn, &c.

Specialties: **FLAX SEED** and **BIRD SEEDS.**

Warehouses: 115, 117 & 119 Kinzie St., OFFICES, 115 KINZIE ST., 104, 106, 108 & 110 Michigan St., CHICAGO.

# BOSTON MAILING BOX COMPANY.

**The ONLY Wooden Mailing Case in the Market approved by the P. O. Department.**

POST OFFICE DEPARTMENT OF THE GENERAL SUPERINTENDENT OF RAILWAY MAIL SERVICE.
WASHINGTON, D. C., May 10, 1888.

*Boston Mailing Box Co., Boston, Mass.*

GENTLEMEN:—Your boxes meet all the requirements for transportation of liquids through the mails. They have been thoroughly tested and are entirely satisfactory.

Very respectfully,
T. E. NASH, Gen'l. Supt.

All Sizes in Stock. Prices range from 1c to 4c each.

## BOSTON MAILING BOX COMPANY,

**35 & 38 Central Whf., Boston.**

---

S. L. JONES.
E. D. JONES.

## S. L. JONES & CO.,

Liberal advances made of Consignments for Public or Private Sales.

**AUCTIONEERS, COMMISSION MERCHANTS AND IMPORTERS OF CHINESE AND JAPANESE GOODS.**

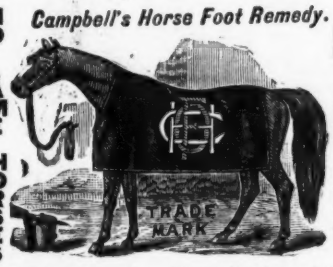
**Buyers of Ginseng.** Agent in Hong Kong, FUNG TANG, Esq., 42 Bonham Strand. P. O. Box 2040. 207 & 209 CALIFORNIA ST., SAN FRANCISCO

---

# CAMPBELL'S HORSE FOOT REMEDY

NO LAME HORSES

*Campbell's Horse Foot Remedy.*




NO BAD FEET

**GUARANTEED TO DO AS REPRESENTED OR MONEY REFUNDED.**

No Stable should be without a Can of

## Campbell's Horse Foot Remedy.

It is a sure cure for all ailments of the feet caused by driving on hard roads, and speedily overcomes the pernicious effects of the dry summer heat, and the mud and slush of winter. It will **Prevent** as well as **Cure** Chippiness or Shelliness in Brittle Feet. Will cure Corns, Quarter Cracks and Split Hoof by promoting growth of the foot rapidly. Will make feet SOFT but TOUGH, enabling the nails to hold better without breaking. Dry, Contracted or Sore Feet are relieved immediately, and it removes all fever in Foundered Feet. It is particularly beneficial to the feet of horses where shoeing is needed often, as it grows plenty of new foot for the blacksmith to work on. For healing Cuts, Wounds, Galls, Soreness over the Kidneys and Swollen Glands in cases of Founder, or as a Liniment this Remedy can not be excelled. It is guaranteed to cure any case of Scratches in a week's time. Thrush or Foot Rot cured in three applications. None genuine without signature of

*Jas. B. Campbell*

**JAS. B. CAMPBELL & CO.,** Proprietors and Manufacturers, **126 Fifth Ave., Chicago, Ills.**
**Correspondence Solicited.**

---

# H. TROMMSDORFF

**Erfurt Chemical Works, Erfurt, Germany.**

OFFER TO THE TRADE A FULL LINE OF

**Scientific, Pharmaceutical, Technical Preparations & Chemicals!**

THROUGH THEIR AGENTS

## EIMER & AMEND.

**NEW YORK.**

**CHEMISTS' SUPPLIES**

**Strictly Chemically Pure Acids,**
**Strictly Chemically Pure Chemicals,**
**Superior Bohemian Glassware,**
**Superior Filterpapers,**
**Superior German Porcelains,**
**Superior Heating Apparatus,**
**Superior Graduated Ware,**
**Perfect Balances and Weights,**
**Perfect Acid-proof Stoneware,**
**Platinum Vessels and Salts,**
**Selected Drugs, Chemicals and Pharmaceutical Preparations,**
**All Testing Appliances and Reagents**

OFFERED BY

## EIMER & AMEND,

**205, 207, 209 & 211 Third Avenue, NEW YORK.**

SOLE AGENTS FOR

**H. Trommsdorff's Chemicals,**
**Joseph Kavalier's Bohemian Glass,**
**Schleicher & Schull's C. P. Filter-papers,**
**E. Marchs' Sons, German Stoneware,**
**Dr. C. Schelbler's Polariscopes,**
**Professor Jolly's Spiral Balances**

---

# PERFECT POSTAL PACKAGES

PERFECT POSTAL PACKAGES

## Improved QUALITY, Reduced COST.

*Lightest, Strongest, Cheapest.*

**ABSOLUTELY SAFE FOR MAILING LIQUIDS, OILS, SYRUPS AND OTHER SAMPLES.**

**Approved by the U. S. P. O. Dep't.**

### POST OFFICE DEPARTMENT.

*Office of the General Superintendent of Railway Mail Service.*

WASHINGTON, D. C., December 12, 1887.

POSTAL PACKAGE Co., Baltimore, Md.

SIRS—I have *carefully* examined your Package, &c. This Package conforms in ALL RESPECTS to the requirements of the Department, and is suitable for the transmission of Liquids in the mails.

Very respectfully, T. E. NASH, *General Sup't.*

**Made in any Size.** ☞ **SEND FOR SAMPLE AND PRICE LIST.** ☜

**Also Screw Top Tin Mailing Cases for Fertilizers, Flour, Grain, etc**

---

# Self Sealing Screw Top Cans.

*NO EXTRA COST*

For

**Solder or Fuel,**

AS THEY

Do Not Require

**TOOL OR KNIFE**

**EASILY OPENED AND CLOSED.**

**Contents Preserved Until All is Removed.**

**Can be used any number of times. Top or Can not injured in opening.**

***Particularly Adapted For***

**Mixed Paints,**
**White Lead,**
**Varnish,**
**Printers' Ink,**
**Colors.**

**Condensed Milk,**
**Lard,**
**Vegetables,**
**Fruit,**
**Spices.**

ABSOLUTELY OIL AND AIR TIGHT.

**MADE IN ALL LEADING SIZES.**

Sole Manufacturers and Patentees:

# POSTAL PACKAGE CO., No. 34 S. PACA ST., BALTIMORE, MD.

yield per acre this year is shown to be 4¾ lbs against 25¾ lbs last year. So far we have heard but two results of the new planting; Geo. Querion from oue acre obtained eleven pounds and one ounce, and George Fanning from half an acre got eight pounds and fourteen ounces. H. G. HOTCHKISS' SONS.

### Coca Grown in India.

It is now three years since Surgeon General Bidie's lecture upon Erythroxylon Coca drew the attention of planters in this country to the possibility of cultivating the shrub at a profit. We were able shortly afterwards to give our readers some information as to the management and yield of the new product, and to show that as long as prices for the leaf remained steady there was money to be made out of it. A considerable demand for plants was consequently created, and seeds were advertised for sale at a rupee a piece. The Madras Agri-Horticultural Society was, however, able to supply its members at a more reasonable rate, and as most estates in our planting districts have now a few specimens growing, it would be possible to largely extend the cultivation if it seemed desirable. Dr. Warden has lately communicated to the Agricultural and Horticultural Society of India the results of a series of experiments made by him with coca leaf grown in the Bengal Presidency, and has shown that its medicinal value is as great, if not superior to, that produced in South America. In Peru and Bolivia, the natural home of the shrub, the coca leaf is by popular belief endowed with almost miraculous qualities. The Indians will work, or travel carrying heavy loads, without other sustenance for days together; and in one form or another these leaves are looked upon as a remedy for most diseases. Coca is grown upon the slopes of the Andes at an elevation of from 2,000 to 5,000 feet; it requires, however, a warm moist climate with almost incessant rainfall. The soil must be very good, and heavy forest land is usually felled for it. It, however, flourishes for as long as forty years, giving three crops of leaf annually. Nursery plants of about eighteen months growth are planted out in pits, very much as tea or coffee, except that it is found advisable not to fill in the pits until the plants are established. The ground is kept free from weeds, beyond which no cultivation appears to be necessary, and, after two years or so, plucking is commenced and carried on regularly. The mature leaves are known by being bright green on their upper surface, and yellowish on their lower surface; they are plucked separately, and with great care to avoid crushing, and are slowly dried in the sun. Dr. Trimen says that the usual yield is over 2,000 lbs. per acre annually, and in Dr. Warden's paper the market value in London is quoted at 2s 6d a pound. The Peruvians and Bolivians between them are said to produce 22 million pounds, of which only 5 per cent., or something over one million, is exported.

The great attention which has been attracted to coca cultivation of late years was due to the discovery that the alkaloid cocaine, contained in the leaves, was of valve in surgery as a local anæsthetic, especially in operations on the eye; and it was believed by some that a demand would spring up for the leaves very much as has been the case for cinchona bark. Dr. Warden's experiments were directed to discovering under what conditions of locality and subsequent treatment the Indian grown coca would give the best yield of alkaloid. It must, however, be remembered that the leaf came from plants that had only been put out for eighteen months or so, and that subsequent experience may largely modify the results arrived at. As far as these results go, it would seem that neither altitude nor rain fall has much to do with the percentage of alkaloid present. Two extreme cases were those of leaves grown at Jalpaiguri 1,700 feet above the sea, yielding 1·02, and at Arcuttipore, in Cachar, at an elevation of only 120 feet, giving 1·3 per cent. In the latter case, however, the soil round the plants had been heavily manured. Coca grown in the Jaunpore district, again, with but 30 to 40 inches of rain a year, gave only four-hundredths per cent. less alkaloid than the sample from the Doars, where they have 180 to 200 inches. The period at which the leaf is gathered seems to be of importance, as samples taken from the Society's garden at Alipore, at an interval of six weeks, showed a difference of nearly 300 per cent.

As to the effects of cultivation and manure, the result arrived at is somewhat contradictory. The best leaf came from Arcuttipore, where the plants had had been manured with cowdung and soot, but that from the Jaunpore district, which is also described as having been heavily manured, gave only 0·571 of alkaloid. In Peru it is found advisable to grow coca under shade, and the "cocales," as the plantations are

This cut will be mailed to any dealer, who will use it in his paper space, to attract to same.

One agent wanted in every town. Write for special offer. Liberal Adv' matter.
HOP REMEDIES CO., 99 & 101 Broad and 301, 303 & 305 Franklin Sts., BOSTON, MASS.

BOURBON Vanillas. WILD Vanillas. MEXICAN Cut Vanillas. Angostura AND Surinam Tonquas. SEEDS.

"B — & — K"
MEXICAN
NEW CROP
VANILLA BEANS

EXTRA Oils of CEDAR, LEMON ROSE, ORANGE SWEET. BERGAMOT, REFINED PARAFFINE. WAX.

BRANDT & KIENZLER, 160 Franklin St., N. Y.

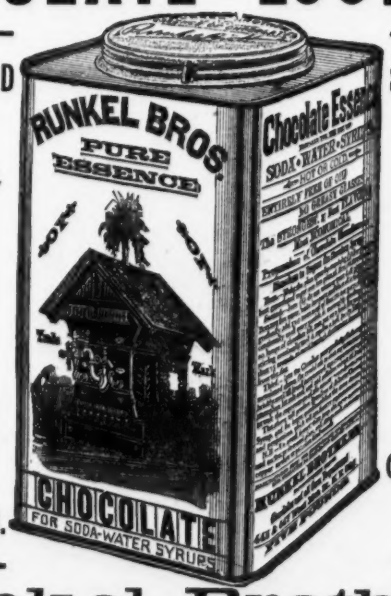
OLDEST HOUSE IN THE BUSINESS IN THE UNITED STATES. ESTABLISHED 1836.

WILLIAM LANG & SON,
MANUFACTURERS OF
ROCK CANDY,
ROCK CANDY SYRUPS,
Burnt Sugar Coloring.
207 and 209 Bainbridge St., Philadelphia.
Branch House: 28 and 30 West Broadway, NEW YORK.

BOURBON VANILLA BEANS
ESSENTIAL OILS
MUSK, AMBERGRIS.
Raw Materials for Perfumers and Soap Makers.
LEO BERNARD & CO.,
*Importers and Sole American Agents for G. De Laire & Co., Paris, France*
*Haarmann & Reimer, Holzminden, Germany.*
*VANILLINE, COUMARINE, HELIOTROPINE, ETC.*
*Paris, France:* 117 *Bod. Richard Lenoir.* *New York:* 228 *Pearl Street.*

PEIRSON & PERKINS, NEWARK, WAYNE CO., N. Y., U. S. A.
Manufacturers and Distillers of
Pure Essential Oils, Peppermint, Spearmint, Tanzy and Wormwood.
Awarded GOLD MEDALS at Amsterdam and New Orleans.
Correspondence Solicited for Domestic and Export Trade.

For Soda Water Syrups.
CHOCOLATE ESSENCE.
WARRANTED NOT TO SOUR OR Separate and Not Grease GLASSES HOT OR COLD.




SUPERIOR IN FLAVOR and Most ECONOMICAL Costing Only 75 Cents a Gallon.

Runkel Brothers,
M'f'rs of Chocolates and all Cocoa Preparations.
445 & 447 West 30th St., NEW YORK.
Sold by Wholesale Druggists in 1 and 5 pound Tins

WANTED: We desire to know what kind of
Vanilla Beans
and how many you are in the market for.
In return we will give you our prices.
Established 1849. O. HOLSTEIN,
PHILADELPHIA.

THOMS & CO.
Manufacturers of
ROCK CANDY, ROCK CANDY SYRUP,
COLORING ETC.
813 S. Broadway, Baltimore, Md.
ALL GOODS GUARANTEED.

# WHOLESALE PRICES CURRENT.

☞Our Quotations are those of Importers and Manufacturers, for original packages and large lots. For broken lots higher prices are asked.

## Oils, Etc.

### Vegetable Oils.

| | | |
|---|---|---|
| Linseed Domestic Raw, in bbls, ℔ gal | .53 | @54 |
| Boiled, in bbls | — | @56 |
| Calcutta, Raw, in bbls | .53 | @54 |
| Western on spot | .50 | @51 |
| Rapeseed, in bbls | .54 | @55 |
| Cottonseed, Crude Prime | .42 | @43 |
| Crude, off quality | .38 | @39 |
| Yellow Summer Prime, | .48½ | @50 |
| Yellow Summer, off qual. | .46 | @47 |
| Yellow Summer, cooking | — | @— |
| White Summer | .49 | @50 |
| Yellow Winter | — | @53 |
| White Winter | — | @54 |
| Soap stock | 1¾ | @1¾ |
| Olive, Sicily | .68 | @72 |
| Spanish | .69 | @71 |
| Soap Stock | — | @ 5¼ |
| Palm, prime ℔ ℔ | 4¾ | @ 5 |
| Off quality | 4½ | @ 4¾ |
| Cocoanut, Domestic | 5½ | @ 5¼ |
| Ceylon | — | @ 5½ |
| Cochin | 6¼ | @ 6¼ |
| Castor, No. 2 | — | @— |
| No. 3 | 11½ | @12 |
| Rosin, first run ℔ gal. | — | @ 9 |
| Second run | — | @12 |
| Third run | — | @15 |
| Deodorized | — | @18 |

### Animal and Fish Oils.

| | | |
|---|---|---|
| Whale, natural winter ℔ gal. | .40 | @41 |
| Bleached winter | .42 | @43 |
| extra bleached winter | .44 | @45 |
| Bleached spring | .40 | @41 |
| Sperm, natural winter | .67 | @70 |
| Bleached winter | .72 | @74 |
| Natural spring | .61 | @64 |
| Bleached spring | .66 | @68 |
| Sea elephant, bleached winter | .55 | @56 |
| Unbleached winter | .50 | @51 |
| Lard, prime city | .70 | @71 |
| prime, western | .70 | @71 |
| Extra No. 1 | .46 | @57 |
| No. 1 | .36 | @39 |
| No. 2 | .40 | @42 |
| Menhaden, prime crude | .25 | @26 |
| Prime southern | .24 | @25 |
| Brown strained | — | @29 |
| Light strained | — | @30 |
| Extra bleached white | — | @36 |
| Bleached winter | — | @32 |
| Bank | .28 | @29 |
| Straits | .29 | @30 |
| Oleo | .8 | @ 9½ |
| Cod, Domestic, prime | .31 | @33 |
| Newfoundland | — | @— |
| Black Fish, Crude | — | @— |
| Natural | — | @— |
| Bleached Winter | — | @— |
| Degras, English | 2¾ | @ 2½ |
| French | — | @— |
| Tallow, Prime | — | @46 |
| Neatsfoot, Prime | .60 | @75 |
| No. 1 | .55 | @60 |
| No. 2 | .45 | @50 |
| Saponified Red | .37 | @38 |
| Elaine Red | .36½ | @40 |

### Mineral Oils.

| | | |
|---|---|---|
| Paraffine Gas Oil ℔ gal | 5½ | @ 6 |
| 22 gravity | .18 | @19 |
| 23½@24 gravity | 11½ | @12 |
| 25 gravity | 10½ | @11 |
| 28 gravity | 8½ | @ 9 |
| Red Paraffine, 21@21½ gravity | .16 | @17 |
| 22½@23 gravity | .13 | @14 |
| High viscosity | .18 | @— |
| Neutral filtered, 32 grav., bloomless | .18 | @20 |
| extra cold test | .22 | @40 |
| 34 gravity, bloomless | .16 | @18 |
| 37 gravity, bloomless | .15 | @16 |
| 32 gravity, wool grade | .11 | @12 |
| West Virginia, natural, 29 gravity | .17 | @18 |
| Franklin, natural, 32 gravity | — | @— |
| Smith's Ferry, 33@34 gravity | 7½ | @ 8 |
| Black reduced, 29 gravity, 25@30 c. t. | .8 | @ 9 |
| 29 gravity, 15 cold test | 8½ | @ 9½ |
| 29 gravity, zero | .10 | @11 |
| Summer | 6½ | @ 7 |
| Cylinder, light filtered | .15 | @20 |
| dark filtered | .14 | @21 |
| extra cold test | — | @— |
| dark steam refined | .10 | @18 |

### Oil Cake.

| | | |
|---|---|---|
| Calcutta cake, city ℔ ton | — | @ — |
| City domestic | — | @23 25 |
| Western, in bags | .23 | 00@— |
| Cottonseed cake at Memphis | .18 | 00@18 50 |
| do do New Orleans | — | @21 00 |

### Oil Meal.

| | | |
|---|---|---|
| State domestic meal ℔ ton | 25 | 00@— |
| Cottonseed meal at Memphis | .16 | 00@16 50 |
| do do New Orleans | .21 | 25@— |

### Wax Candles, Lard, Tallow, Etc.

| | | |
|---|---|---|
| Paraffine wax, crude, 124@126 m p ℔ ℔ | 4½ | @ 4¾ |
| 128@130 m. p | 4¾ | @ 5 |
| refined 136 m. p | 9 | @ 9½ |
| Candles, Paraffine, 4s and 6s | 10 | @12 |
| 12s | 10½ | @12½ |
| Adamantine, 6s, 16 oz | — | @ 9 |
| 14 oz | — | @ 8 |
| 12 oz | — | @ 7 |
| 12s, 16 oz | — | @10 |
| 14 oz | — | @ 9 |
| 12 oz | — | @ 8 |
| Patent sperm, 4s and 6s | .43 | @44 |
| Sperm, 4s and 6s | .36 | @37 |
| Stearic acid | .11 | @13 |
| Spermaceti | .31 | @32 |
| Lard | .9 30 | @10 85 |
| Stearine | .10 | @11¾ |
| Tallow | — | @ 5¼ |

### Naval Stores.

| | | | |
|---|---|---|---|
| Sp. tur'tine | 37 | @37½ | |
| St'd rosin | — | @1 02½ | |
| G'd st'd | 1 07½ | @— | |
| E | 1 15 | @— | |
| F | 1 20 | @— | |
| G | 1 25 | @— | |
| H | 1 32½ | @— | |
| I | 1 40 | @— | |
| K | 1 50 | @— | |
| M | 1 55 | @— | |
| N | 1 80 | @— | |
| W G | 2 50 | @— | |
| W W | 2 85 | @— | |

## Paints, Varnishes, Etc

### White Lead, Zinc, Etc.

| | | |
|---|---|---|
| American Dry White Lead ℔ ℔ | 5 | @5½ |
| Pure White Lead, in oil | 5½ | @5½ |
| English White Lead, in oil | 8½ | @8¾ |
| Zinc White, Paris, G S, 50 bbls | 7½ less | 4 ℔ ct |
| G S, 25 bbls | 7½ | 2 ℔ ct |
| G S, 10 bbls | 7½ | 1 ℔ ct |
| R S, 50 bbls | 6¾ | 4 ℔ ct |
| R S, 25 bbls | 6¾ | 2 ℔ ct |
| R S, 10 bbls | 6¾ | 1 ℔ ct |
| Antwerp R S, 50 bbls | 5¾ | 4 ℔ ct |
| R S, 25 bbls | 5¾ | 2 ℔ ct |
| R S, 10 bbls | 5¾ | 1 ℔ ct |
| V M Co., grinding in poppy oil, Green Seal | 10½ | @10⅝ |
| Grinding in poppy oil, Red Seal | 8¾ | @ 9¼ |
| French in Varnish | .16 | @20 |
| American Extra Dry | 4¼ | @ 4½ |
| Off color | 4 | @ 4½ |
| In oil | 6¼ | @6¾ |
| In varnish | .14 | @18¾ |
| L. Z. O. German zinc | 5¾ | @ 5 |
| China white | 10½ | @12 |
| Flake white | 10½ | @12 |
| Cremnitz white | .15 | @20 |

### Dry Colors.

REDS.

| | | |
|---|---|---|
| Carmine No. 40 ℔ ℔ | 3 15 | @ 3 50 |
| Crocus martus, imported | 1½ | @ 2½ |
| Standard American | 1½ | @ 2½ |
| Colcothar | 3½ | @ 6 |
| Indian red, American | 3½ | @ 6½ |
| Standard American | 2 | @ 3 |
| English | 5½ | @ 7 |
| Tuscan red, English | 9¾ | @ 11 |
| Turkey red, English | 9½ | @ 14 |
| Litharge, English flake | 9 | @ 9½ |
| American powdered | 5½ | @ 6½ |
| Red lead, English | 8½ | @ 9 |
| American | 6 | @ 6½ |
| Orange mineral, English | 8½ | @ — |
| French | 8¾ | @ 9¾ |
| German | 8½ | @ 9 |
| American | 8 | @ 8½ |
| Rose pink, English | 9 | @ 9½ |
| American | 8 | @ — |
| Vermilion, imported English | .82 | @ 85 |
| Am. quicksilver, bulk | .57 | @ — |
| Am. quicksilver, bags | .58 | @ — |
| Chinese | — | @ 77½ |
| Trieste | .72 | @ 77 |
| American | 10½ | @ 11 |
| Artificial | 8 | @ 25 |
| Venetian red, Cookson's | 1 40 | @1 45 |
| H. R. Co's Diam'd M | 1. 45 | @1 50 |
| Diam'd H | 1. 10 | @1 25 |
| F V A | 1 05 | @1 20 |
| L L & Co Diamond H | 1. 10 | @1 20 |
| H B | 1. 10 | @1 20 |
| Bell brand | — | @1 45 |
| B O W | — | @1 30 |
| V V R | — | @1 60 |
| Crown | 1 40 | @1 50 |
| Lion | 1 20 | @1 25 |
| Anchor H | 1 10 | @1 30 |
| American | 1 00 | @1 30 |
| Cutter | 1 30 | @1 35 |

YELLOWS.

| | | |
|---|---|---|
| Chrome yellow | .10 | @ 25 |
| Ocher, Rochelle | 1 35 | @1 50 |
| Washed Dutch | 5 | @ — |
| Washed French | 2 | @ — |
| Washed Nat Oxford, Lump | 6½ | @ 6¾ |
| Washed Nat Oxford, Powd'r | 7 | @ 7½ |
| Golden | 3¾ | @ 4 |
| Domestic | 3¾ | @ 1½ |
| Domestic, for O C & W P | ⅞ | @ 1 |

GREENS.

| | | |
|---|---|---|
| Chrome, Chemically pure | .22 | @26 |
| Extra | .12 | @13 |
| Super | 9 | @11½ |
| Common | — | @ 8 |
| Paris, Pure | — | @18¾ |
| In pulp | 11 | @12 |
| French Verdigris | .40 | @42 |

BLUES.

| | | |
|---|---|---|
| Chinese Blue | .45 | @50 |
| Prussian Blue | .30 | @35 |
| Soluble Blue | .45 | @55 |
| Ultramarine Blue | 7 | @25 |
| Celestial Blue | 5½ | @ 8 |
| Blue verditer | .25 | @30 |
| refiners' | .60 | @70 |

BROWNS.

| | | |
|---|---|---|
| Sienna, Italian, burnt & powdered | 6 | @ 6½ |
| burnt lumps | 3 | @ 3½ |
| raw powdered | 6 | @ 7 |
| raw lumps | 3½ | @ 4 |
| American, burnt & powdered | 1¾ | @ 1¾ |
| raw | 1½ | @ 1¾ |
| Umber, Turkey, burnt and powdered | 3½ | @ 4 |
| burnt lumps | 2½ | @ 3 |
| raw and powdered | 3½ | @ 4 |
| raw lumps | 1¾ | @ 2¼ |
| American, burnt | 1¾ | @ 1½ |
| raw | 1¼ | @ 1½ |
| Vandyke brown, English | 6 | @ 8 |
| American | 3 | @ 3¼ |
| Spanish brown | ¾ | @ 1 |

### Miscellaneous.

| | | |
|---|---|---|
| Barytes, prime white ℔ ton | 16 00 | @18 00 |
| foreign floated | 19 00 | @21 00 |
| domestic floated P & K | 30 00 | @32 00 |
| off color | 12 50 | @14 00 |
| Chalk | — | @ 3 50 |
| kiln dried ℔ 100 lbs. | 45 | @ — |
| air dried | 30 | @ 35 |
| China clay ℔ ton | 13 00 | @18 50 |
| Cobalt oxide | 2 50 | @ 2 90 |
| Feldspar ℔ ton | 15 00 | @ — |
| Silex | 14 00 | @25 00 |
| Whiting, commercial ℔ 100 lbs. | 45 | @ 55 |
| gilders' | 60 | @ 65 |
| Paris white, English cliffstone | 1 05 | @ 1 15 |
| American | 65 | @ 80 |
| French talo | 1¼ | @ 1½ |
| terra alba | 85 | @ — |
| English terra alba | 85 | @ 80 |
| Blanc fix ℔ ℔ | 2½ | @ 3 |
| Dentists' plaster ℔ bbl. | 1 35 | @ 1 55 |
| Calcined plaster ℔ bbl. | 1 25 | @ 1 50 |
| Marble dust ℔ bbl. | 90 | @ 1 00 |
| Pumice stone, original cks. ℔ ℔ | 1¾ | @ 2 |
| selected lumps in bbls. | 3½ | @ — |
| powdered pure in bbls. | 2½ | @ 2½ |
| Rotten stone original cks | 4½ | @ 5½ |
| selected lumps | 6 | @ 10 |
| powdered, in bbls. | 3½ | @ 3½ |
| Rubbing stone | 5 | @ 7 |
| Bronze powder | — | @ — |
| Brocades | 45 | @ 1 00 |
| Smalt, German blue | 15 | @ — |
| super black | — | @ — |
| Putty ℔ bulk | 1½ | @ 2½ |
| ℔ bladders | 2 | @ 2½ |
| ℔ kegs | — | @ 2½ |

## Glues.

| | | |
|---|---|---|
| Extra white ℔ ℔. | 17 | @20 |
| Medium white | 13 | @15 |
| Cabinet | 12 | @14 |
| Low grade | 8 | @10 |
| Foot stock, white | 9¼ | @13½ |
| brown | 4 | @ 8 |
| Irish | 12½ | @14½ |
| French | 9½ | @22½ |
| English | 10½ | @15 |

### Metallic Paints.

| | | |
|---|---|---|
| Brown ℔ ton. | $27 50 | @32 50 |
| Red | 27 50 | @32 50 |
| Yellow | 27 50 | @32 50 |

### Colors in Oil.

| | | |
|---|---|---|
| Black coach, Japan ℔ ℔. | 18½ | @20 |
| in oil | 12 | @13 |
| Drop black | 8½ | @14½ |
| Ivory black | 8½ | @14½ |
| Lamp black | 12 | @20 |
| Chinese blue | 35 | @40 |
| Prussian blue | 20 | @45 |
| Ultramarine blue | 12 | @18 |
| Burnt sienna | 7 | @14 |
| Raw sienna | 7 | @14 |
| Burnt umber | 7 | @11 |
| Raw umber | 7 | @11 |
| Vandyke brown | 7 | @12½ |
| Chrome green | 8 | @14 |
| Paris green | 16 | @18½ |
| English drop black | 12½ | @14 |
| American drop black | 7½ | @10 |
| Erankfort drop black | 25 | @30 |
| Lampblack, prime | 27½ | @33 |
| medium | 19½ | @26 |
| 2d quality | 13 | @19 |
| low grade | 6½ | @10 |
| Naphtha, black | 60 | @— |
| Fine calcined velvet black | 16 | @25 |
| Medium calcined velvet black | 12 | @15 |

### Varnish Gums.

| | | |
|---|---|---|
| Copal, Sierra Leone, cleaned | .35 | @40 |
| Zanzibar, bold white | .72 | @75 |
| medium white | .62 | @65 |
| bean and pea | .35 | @45 |
| Manila, pale | .17 | @20 |
| bright amber | .13 | @15 |
| standard | .10 | @11½ |
| Damar, Batavia | .22 | @23 |
| Kauri, standard | .18 | @20 |
| No. 2 | .14 | @16 |
| hard scraped | — | @22 |
| light hard scraped | — | @37 |
| picture quality | .65 | @70 |
| pale and fine selected | .42 | @65 |
| Sandrac | 17½ | @20 |
| Asphaltum, Cuban, prime | 5½ | @ 6½ |
| sandy | 4½ | @ 5½ |
| Egyptian | 8 | @ 9 |

### Glass.

PLATE AND WINDOW.

FRENCH SINGLE.

Prices per Fifty Feet.

| Sizes. | 1st. | 2d. | 3d. | 4th. |
|---|---|---|---|---|
| 6x 8 to 10x15 | $10 50 | $ 9 00 | $ 8 50 | $ 8 00 |
| 11x14 to 16x24 | 11 50 | 10 75 | 10 25 | 9 75 |
| 18x22 to 20x30 | 15 50 | 14 00 | 13 00 | 12 50 |
| 15x36 to 24x30 | 16 50 | 15 00 | 13 50 | .... |
| 24x36 to 24x36 | 17 75 | 16 20 | 14 75 | .... |
| 26x28 to 24x30 | 26 00 | 25 00 | 23 00 | .... |
| 26x36 to 26x44 | 19 00 | 17 50 | 15 25 | .... |
| 26x46 to 30x50 | 21 00 | 19 50 | 17 00 | .... |
| 30x52 to 30x54 | 22 00 | 20 25 | 18 00 | .... |
| 30x56 to 34x56 | 23 00 | 21 25 | 19 00 | .... |
| 34x58 to 34x60 | 24 00 | 22 75 | 21 00 | .... |
| 36x60 to 40x60 | 26 50 | 24 50 | 23 00 | .... |

FRENCH DOUBLE.

Prices per Fifty Feet.

| Sizes. | 1st. | 2d. | 3d. | 4th. |
|---|---|---|---|---|
| 6x 8 to 10x15 | $13 00 | $12 50 | $12 00 | $11 50 |
| 11x14 to 16x24 | 16 00 | 15 00 | 14 50 | .... |
| 18x22 to 20x30 | 20 50 | 19 50 | 18 50 | .... |
| 15x36 to 24x30 | 22 00 | 20 75 | 19 50 | .... |
| 26x28 to 24x36 | 25 00 | 23 00 | 21 50 | .... |
| 26x46 to 30x50 | 28 00 | 26 50 | 24 50 | .... |
| 30x52 to 30x54 | 30 00 | 28 00 | 26 00 | .... |
| 30x56 to 30x56 | 31 00 | 30 00 | 28 00 | .... |
| 34x58 to 34x60 | 32 50 | 31 00 | 29 00 | .... |
| 36x60 to 40x60 | 36 00 | 33 50 | 32 00 | .... |

Discounts:—70 10 & 5 for S & D.

AMERICAN SINGLE.

| Sizes. | 1st. | 2d. | 3d. | 4th. |
|---|---|---|---|---|
| 6x 8 to 10x15 | $10 50 | $ 9 00 | $ 8 50 | $ 8 00 |
| 11x14 to 16x24 | 11 50 | 10 75 | 10 25 | 9 75 |
| 18x22 to 20x30 | 15 50 | 14 00 | 13 00 | 12 50 |
| 15x36 to 24x30 | 16 50 | 15 00 | 13 50 | .... |
| 26x28 to 24x36 | 17 75 | 16 25 | 14 75 | .... |
| 26x36 to 26x44 | 19 00 | 17 50 | 15 25 | .... |
| 26x46 to 30x50 | 21 00 | 19 50 | 17 00 | .... |
| 30x52 to 30x54 | 22 00 | 20 25 | 18 00 | .... |
| 30x56 to 34x56 | 23 00 | 21 25 | 19 00 | .... |
| 34x58 to 34x60 | 24 00 | 22 75 | 21 00 | .... |
| 36x60 to 40x60 | 26 50 | 24 50 | 23 00 | .... |

AMERICAN DOUBLE.

| Sizes. | 1st. | 2d. | 3d. | 4th. |
|---|---|---|---|---|
| 6x 8 to 10x55 | $13 00 | $12 50 | $11 00 | $10 00 |
| 11x14 to 16x24 | 16 00 | 15 00 | 13 50 | 12 00 |
| 18x22 to 20x30 | 20 50 | 19 50 | 18 00 | .... |
| 15x36 to 24x30 | 22 00 | 20 75 | 18 75 | .... |
| 26x28 to 24x36 | 25 00 | 23 00 | 21 00 | .... |
| 26x36 to 26x44 | 26 00 | 25 00 | 22 50 | .... |
| 30x46 to 30x50 | 28 00 | 26 50 | 24 75 | .... |
| 30x52 to 30x54 | 30 00 | 28 00 | 25 25 | .... |
| 30x56 to 34x56 | 31 00 | 30 00 | 27 00 | .... |
| 34x58 to 34x60 | 32 50 | 31 00 | 28 00 | .... |
| 36x60 to 40x60 | 36 00 | 33 50 | 30 00 | .... |

Discounts:—75&5@75&10.

## Drugs.

### Opium.

| | | |
|---|---|---|
| Opium, in bond ℔. ℔. | 1 70 | @1 85 |
| duty paid (cases) | 2 70 | @2 80 |
| as wanted | 2 80 | @2 90 |
| powdered | 3 95 | @4 00 |
| Morphine | 2 10 | @2 40 |
| foreign | 2 00 | @2 25 |

### Quinine.

| | | |
|---|---|---|
| Quinine, American ℔ oz. | 43 | @ 50 |
| English | — | @ — |
| French | — | @ — |
| German | 33 | @ 45 |
| Cinchonidia, American | 5 | @ 5½ |
| foreign | 4 | @ 5 |
| Quinidia, German | 16 | @ 20 |

### Miscellaneous.

| | | |
|---|---|---|
| Acid benzoic, German ℔ ℔. | 42½ | @ 55 |
| English ℔ oz. | 11½ | @ 13 |
| boracic purified ℔ ℔. | 20 | @ — |
| refined | 15 | @ — |
| flaky | 14 | @ — |
| carbolic, pure crystals | 80 | @ — |
| Acid carbolic commercial | 25 | @ 30 |
| citric, domestic | 50 | @ — |
| foreign | 50 | @ 51 |
| salicylic, bulk & boxes | 1 56 | @ 1 62 |
| Alcohol, 94 p ct, free per gal. | 2 20 | @ 2 22 |
| refi'd wood, 95 p ct | — | @ 1 10 |
| 92 p ct | — | @ 1 05 |
| dia methyl, 98 p ct. | 1 25 | @ 1 30 |
| Inodorine, 97-99 p ct | 1 50 | @ 1 60 |
| Cologne spirits, 188 p t | 2 32 | @ 2 — |
| Ambergris gray | 22 00 | @30 00 |
| black | 9 00 | @12 00 |
| Ammonia carb, foreign | 7½ | @ 8 |
| domestic | 8 | @ 8½ |
| Bay rum imp, bulk | 1 95 | @ 2 00 |
| Barbadoes tar | 38 | @ 40 |
| Borax, refined city, bbls ℔ ℔. | 8½ | @ 8⅝ |
| Cal., bbls | 8¼ | @ 8⅜ |
| concentrated | 7¾ | @ 7¾ |
| powdered | 8½ | @ 9 |
| Bromine | 37 | @ |
| Burgundy pitch | 2¾ | @ |
| Cantharides, Russian | 1 32½ | @ 1 37 |
| Chinese | 38 | @ 40 |
| Calomel, domestic | 65 | @ 67 |
| English | 1 05 | @ 1 10 |
| Castile soap, white | 10¾ | @ 10¾ |
| green, pure | 6¼ | @6¾ |
| mottled ordinary | 4½ | @ 4¾ |
| pure | 5¼ | @ 5¾ |
| Chian turpentine ℔ oz. | 45 | @ — |
| Chloroform | 40 | @ 45 |
| Colocynth apples, Trieste ℔ ℔. | 46 | @ 50 |
| pressed | — | @ — |
| Spanish | 24 | @ 27 |
| Cacao butter | 32 | @ 35 |
| Chloral hydrate, crystals | 1 55 | @ — |
| plates | 1 25 | @ — |
| Corrosive sublimate | 57 | @ 60 |
| Cuttlefish bone, Trieste | 21½ | @ 22 |
| Dragon's blood mass | 20 | @ 22 |
| reed | 42 | @ 45 |
| Ergot, Spanish | 24 | @ 26 |
| German | 20 | @ 22 |
| Gelatine, English | 50 | @ 60 |
| French | 30 | @ |
| American | 85 | @ — |
| Glucose | 2¾ | @ 3¼ |
| Grape sugar | 2¼ | @ 3 |
| Glycerine, German, dms | 16½ | @ 18 |
| H. L. & Co., bbls & cs | 16½ | @ 18 |
| W. J. M. G., bbls & cs | 16½ | @ 18 |
| A. G. Co. C. P., bbls & cs | 16½ | @ 18 |
| No. 1, pure white | 15½ | @ 17 |
| M. W & Co. C. P., bbls & cans | 16½ | @ 18 |
| P. W., bbls & cs | 15½ | @ 17 |
| C. G. Co., bbls & cs | 16½ | @ 18 |
| M. & R., bbls & cs | 16½ | @ 18 |
| Glycerine, crude | 10½ | @ 11½ |
| Guarana, whole | 1 10 | @ 1 15 |
| Powdered | 1 20 | @ 1 25 |
| Iceland moss | 4½ | @ |
| Indian hemp (Canabis In) | 7 | @ 12 |
| Insect powder | 47½ | @ 55 |
| B. W. B | — | @ 55 |
| Irish moss | 5 | @ 10 |
| Isinglass, Russian | 3 50 | @ 3 75 |
| American ordinary | 70 | @ 75 |
| prime | 90 | @ 1 50 |
| Iodine, re-sublimed | 3 50 | @ — |
| Licorice Corigliana | 20 | @ — |
| Guzzolini | 26 | @ — |
| Guis Grasso | 24 | @ 26 |
| "P. & S." | 28 | @ 29 |
| Domestic | 20 | @ — |
| Paste | 13 | @ — |
| Lupulin, American ℔ ℔ | 70 | @ — |
| German | 50 | @ — |
| Lycopodium, prime | 38½ | @ 40 |
| Manna, large flake | 70 | @ 72½ |
| Small flake | 35 | @ 37½ |
| Sorts | 30 | @ 35 |
| Menthol | 1 50 | @ 2 00 |
| Musk, true grain ℔ oz | 38 00 | @40 00 |
| Tonquin pods | 25 00 | @26 00 |
| Canton grains | 20 | @ 1 00 |
| Nitrate barium ℔ ℔ | 8 | @ 8½ |
| Strontia ℔ ℔ | 9¾ | @ 10 |
| Nux vomica, pockets ℔ ℔ | 3½ | @ 3¾ |
| Oil, almond, sweet | 30 | @ 37 |
| Myrbane, American | 16 | @ 18 |
| English | 16 | @ 18 |
| German | — | @ — |
| Sesame ℔ bbl | 70 | @ 75 |
| Castor, city, bbls & cases | 14 | @ 15 |
| Cod liver Norwegian ℔ bbl | 22 50 | @28 00 |
| Newf'land ℔ gal. | 65 | @ 70 |
| Phosphorus ℔ ℔ | 70 | @ 75 |
| Precip, red | 75 | @ 77 |
| White | 80 | @ 82 |
| Precipitated chalk, Eng. bk | 5 | @ — |
| bbls | 7 | @ — |
| Potassium, bromide, bt.lk | 34 | @ — |
| glass | 42 | @ 43 |
| Iodide, bulk | 2 70 | @ 2 75 |
| glass | 2 78 | @ 2 85 |
| Quicksilver | 56 | @ 60 |
| Sago, pearl | 3½ | @ 3¾ |
| Flour | 3½ | @ 4 |
| Sugar of milk cob | 16½ | @ 17 |
| Powdered | 17 | @ 18 |
| Sulphur, roll | — | @ ¾ |
| Flour | — | @ 2 |
| Salicine | 2 20 | @ 2 25 |
| Tamarinds ℔ ℔ | 8 | @ 8½ |
| Venice turpentine ℔ ℔ | 18 | @ 20 |
| Wax, brown southern | 26 | @ 27 |
| State | 25 | @ 26 |
| Brazil | 10½ | @ 14 |
| White, pure | 40 | @ 45 |
| Japan | 11½ | @ 12 |
| Carnauba | 10 | @ 16 |
| Ceresin | 10½ | @ 11 |

### Balsams.

| | | |
|---|---|---|
| Copaiba, Angostura ℔ ℔ | — | @67½ |
| Para | — | @64 |
| Central | 55 | @60 |
| Fir, Canada ℔ gal | 2 40 | @2 50 |
| Oregon | 90 | @1 20 |
| Peru ℔ ℔ | 1 03½ | @1 07½ |
| Tolu | — | @ — |

### Barks.

| | | | | |
|---|---|---|---|---|
| Angostura | ℔ lb | 18 | @ | 20 |
| Bayberry | | 7 | @ | 8 |
| Buckthorn | | 8 | @ | 13 |
| Cascarilla | | 9 | @ | 10 |
| Canella | | 12 | @ | 12½ |
| Cinchona, red | | 20 | @ | 1 45 |
| yellow | | 12 | @ | 1 25 |
| Coto | | 60 | @ | 25 |
| Elm, common | | 9 | @ | 10 |
| selected | | 12 | @ | 14 |
| Loxa | | 30 | @ | 32 |
| Oak, white | | 3½@ | | 4 |
| red | | 3½@ | | 4 |
| Orange peel, West Indian | | 4 | @ | 6 |
| Malaga, prime | | 7 | @ | 10 |
| Curacoa | | 7½@ | | 15 |
| Prickly ash | | 10 | @ | 12 |
| Pomegranate (of root) | | — | @ | 20 |
| Quebracho | | 12 | @ | 15 |
| Sassafras | | 8 | @ | 8½ |
| Simaruba | | 14 | @ | 20 |
| Soap, whole | | 5 | @ | 6 |
| crushed | | 6½@ | | 6¾ |

### Beans.

| | | | | |
|---|---|---|---|---|
| Vanilla, Mexican | ℔ lb | 2 50 | @ | 9 00 |
| Bourbon | | 2 50 | @ | 8 00 |
| Tonka, Angostura | | 1 30 | @ | 1 40 |
| Surinam | | 80 | @ | 90 |
| Para | | — | @ | 45 |
| Calabar | | 22 | @ | 25 |
| St. Ignatius | | 50 | @ | 55 |

### Berries.

| | | | | |
|---|---|---|---|---|
| Cubeb | ℔ lb | 1 50 | @ | 1 75 |
| Juniper | | 4½@ | | 5 |
| Fish (Cocculus Ind) | | 4 | @ | 4½ |
| Laurel | | 5 | @ | — |
| Prickly ash | | 30 | @ | — |

### Essential Oils.

| | | | | |
|---|---|---|---|---|
| Anise | ℔ lb | 1 60 | @ | 1 65 |
| Almond (bitter) | | 2 50 | @ | 6 75 |
| Bay, ℔ bottle of 22 ozs | | 6 00 | @ | 6 50 |
| Bay oil, ℔ lb | | 3 62½@ | | 4 73 |
| Bergamot | | 2 50 | @ | 2 70 |
| Black pepper | | 85 | @ | 5 50 |
| Cajeput | | 67½@ | | 70 |
| Camphor | | 7½@ | | 11 |
| Caraway, seed | | 1 05 | @ | 1 50 |
| chaff | | 40 | @ | 53½ |
| Cassia | | 70 | @ | 72½ |
| Citronella | | 33 | @ | 35 |
| Clove | | 1 35 | @ | 1 45 |
| Copaiba | | — | @ | 1 40 |
| Croton | | 95 | @ | 1 00 |
| Cubebs | | 14 00 | @ | 14 50 |
| Cumin, American | | 3 50 | @ | 5 50 |
| Fennel | | 85 | @ | — |
| seed | | 1 50 | @ | — |
| Geranium, Turkish | | 3 00 | @ | 3 50 |
| rose, French | | 8 00 | @ | 9 50 |
| Gingergrass | | 2 25 | @ | — |
| Juniper, once rect | | — | @ | 1 10 |
| twice rect | | 1 75 | @ | 2 10 |
| wood | | 27 | @ | 37 |
| Lavender, garden | | 50 | @ | 75 |
| flowers | | 1 50 | @ | 1 70 |
| Lemon | | 1 15 | @ | 1 70 |
| Lemongrass | | 62½@ | | 65 |
| Neroli, bigarade | | 40 00 | @ | 45 00 |
| Portugal | | 27 50 | @ | — |
| Petale | | 50 00 | @ | — |
| Nutmeg | | 2 00 | @ | 2 25 |
| Orange, sweet | | 1 15 | @ | 1 60 |
| bitter | | 1 65 | @ | 4 00 |
| Origanum | | 18 | @ | 25 |
| Peppermint, tin cans | | 1 95 | @ | 2 25 |
| cases | | 2 65 | @ | 2 80 |
| A. M. T. crystal white tins | | 2 40 | @ | 2 55 |
| cases | | 3 00 | @ | — |
| Pennyroyal | | 90 | @ | 1 00 |
| Rose | | 4 65 | @ | 4 75 |
| Ihmsen's | ℔ oz | 5 00 | @ | 5 25 |
| Holstein's | | 4 75 | @ | 5 00 |
| Rosemary, Trieste | ℔ lb | 47½@ | | — |
| French | | — | @ | 35 |
| Flowers | | 70 | @ | 1 10 |
| Sandalwood | | 2 25 | @ | 10 50 |
| Sassafras | | 60 | @ | 65 |
| Spearmint | | 2 25 | @ | 3 00 |
| Tansy | | 2 95 | @ | 3 50 |
| Thyme, red | | 21 | @ | 82½ |
| white | | 50 | @ | 1 10 |
| Wintergreen | | 1 90 | @ | 2 00 |
| Wormseed | | 1 50 | @ | — |
| Wormwood | | 4 50 | @ | 5 00 |

### Flowers.

| | | | | |
|---|---|---|---|---|
| Arnica | ℔ lb | 7 | @ | 8 |
| Chamomile, German | | 18 | @ | 25 |
| Roman (new) | | 30 | @ | 32½ |
| Insect | | 45 | @ | 55 |
| Lavender | | 3 | @ | 7 |
| Rosemary | | 15 | @ | 20 |
| Saffron, American | | — | @ | 14 |
| Alicante | | — | @10 | 00 |
| Valencia | | 15 00 | @16 | 00 |

### Gums.

| | | | | |
|---|---|---|---|---|
| Aloes, Cape | ℔ lb | 5½@ | | 7 |
| Barbadoes | | 19 | @ | 25 |
| Curacoa | | 4 | @ | 6 |
| Socotrine | | 40 | @ | 52 |
| Arabic, 1st picked | | 84½@ | | 97 |
| 2d picked | | 84½@ | | 97 |
| 3d picked | | 74½@ | | 77 |
| 4th picked | | 64½@ | | 67 |
| 5th picked | | 54½@ | | 57 |
| 6th picked | | 36 | @ | 37 |
| Sorts | | 52 | @ | 70 |
| Siftings | | 25 | @ | 40 |
| Senegal | | 43 | @ | 53 |
| Asafœtida | | 8½@ | | 10 |
| Benzoin | | 25 | @ | 40 |
| Camphor, refined, in bbls | | 24 | @ | 24½ |
| in cases | | 25 | @ | 25½ |
| Chicle | | 26 | @ | 27 |
| Euphorbium | | 15 | @ | 17 |
| Gamboge, pipe and block | | 52½@ | | 55 |
| Gedda, siftings | | — | @ | — |
| sorts | | 22 | @ | 25 |
| Guaiac | | 27 | @ | 28 |
| Kino | | 11 | @ | 12 |
| Mastic | | 82½@ | | 85 |
| Myrrh | | 29 | @ | 32 |
| Olibanum, tears | | 15 | @ | 18 |
| sorts | | 6½@ | | 7½ |
| Sandrac | | 17 | @ | 20 |
| Scammony, Aleppo | | 25 | @2 | 50 |
| Virgin | | 7 50 | @ | — |
| Tragacanth, Aleppo, 1st flake | | 41 | @ | 43 |
| 2d flake | | 37 | @ | 40 |
| 3d flake | | 32 | @ | 35 |
| Turkey, 1st flake | | 70 | @ | 75 |
| 2d flake | | 55 | @ | 57½ |
| 3d flake | | 40 | @ | 45 |

### Herbs and Leaves.

| | | | | |
|---|---|---|---|---|
| Aconite | ℔ lb | 9 | @ | 11 |
| Althea | | 8 | @ | 10 |
| Belladonna | | 12 | @ | 15 |
| Buchu, short | | 6½@ | | 8 |
| long | | 20 | @ | 25 |
| Coca | | 25 | @ | 32 |
| Damiana | | 25 | @ | 28 |
| Digitalis | | 6 | @ | 9 |
| Eucalyptus | | 4 | @ | 5½ |
| Grindelia robusta | | 12 | @ | 14 |
| Henbane (hyosciamus) | | 12 | @ | 14 |
| Horehound | | 6 | @ | 8 |
| Jaborandi | | 25 | @ | 27 |
| Laurel | | 3½@ | | 4 |
| Lobelia | | 4 | @ | 7 |
| Mullein | | 10 | @ | 12 |
| Marjoram, German | | 14½@ | | 20 |
| French | | 9 | @ | 11 |
| Prince's pine | | — | @ | 8 |
| Rose, red | | 95 | @1 | 00 |
| pale | | 40 | @ | 55 |
| Rosemary | | 3 | @ | 4 |
| Sage, Italian | | 2½@ | | 2½ |
| Senna, Alex. nat | | 24 | @ | 25 |
| siftings | | 19 | @ | 21 |
| garbled and sifted | | 34 | @ | 35 |
| Tinnivelly | | 9 | @ | 18 |
| Thyme | | 4½@ | | 10 |
| Uva Ursi | | 4 | @ | 4½ |
| Yerba Santa | | 12 | @ | 14 |

### Roots.

| | | | | |
|---|---|---|---|---|
| Aconite | ℔ lb | 10 | @ | 12 |
| Alkanet | | 7½@ | | 9 |
| Althea, whole | | 12 | @ | 12½ |
| cut | | 14 | @ | 16 |
| Angelica, German | | 10 | @ | 12 |
| American | | 9 | @ | 10 |
| Arrowroot, Bermuda | | 31 | @ | 35 |
| St. Vincent, bbls &cns | | 10 | @ | 15 |
| Jamaica | | 10 | @ | 11 |
| Arnica | | 7½@ | | 8 |
| Belladonna | | 8 | @ | 12 |
| Blood | | 10 | @ | 12 |
| Burdock | | 7½@ | | 8 |
| Calamus, bleached | | — | @ | 40 |
| unble'd, split & peeled | | 19 | @ | 24 |
| Canada snake, select | | 34 | @ | 38 |
| Colchicum | | — | @ | 10 |
| Colombo | | 8 | @ | 11 |
| Culvers | | 15 | @ | 16 |
| Dandelion, German | | 10 | @ | 12 |
| American cut | | 11 | @ | 12 |
| Elecampane | | 6 | @ | 8 |
| Galangal | | 3 | @ | 3½ |
| Gentian | | 4½@ | | 5 |
| Ginseng | | 1 75 | @2 | 15 |
| Ginger, Jamaica, unbleached | | 12½@ | | 13½ |
| American, bleached | | 14½@ | | 15 |
| Lonnon, bleached | | 14½@ | | 15 |
| Golden seal | | 20 | @ | 22 |
| Hellebore, white, powdered | | 9 | @ | 9½ |
| whole | | 5½@ | | 6 |
| Ipecac, Rio | | 1 75 | @1 | 85 |
| Jalap | | 11½@ | | 12 |
| Kava Kava | | 18 | @ | 20 |
| Lady slipper | | 12 | @ | 15 |
| Lovage, American | | 40 | @ | 50 |
| German | | 9 | @ | 20 |
| Licorice, ordinary | | 5 | @ | 7 |
| selected, in bdls | | 12½@ | | 20 |
| Mandrake | | — | @ | 5 |
| Orris, Florentine | | 13 | @ | 16 |
| finger | | 48 | @ | 75 |
| Verona | | 6 | @ | 7½ |
| Pareira brava | | 20 | @ | 25 |
| Pellitory | | 16 | @ | 18 |
| Pink | | 42 | @ | 45 |
| Rhatany | | 5 | @ | 8 |
| Rhubarb, whole | | 17½@ | | 60 |
| cut | | 60 | @1 | 50 |
| Sarsaparilla, Honduras | | 20 | @ | 30 |
| Mexican | | 7½@ | | 8 |
| American | | 6 | @ | — |
| Senega, Southern | | 38 | @ | 40 |
| Western | | — | @ | 45 |
| Serpentaria, Texas | | 24 | @ | 25 |
| Stillingia | | 8 | @ | 10 |
| Squills, ordinary | | — | @ | 9 |
| white, prime | | 8 | @ | 9 |
| Valerian, German | | 10 | @ | 11 |
| Belgian | | 7 | @ | 9 |
| English | | — | @ | 17 |
| Vermont | | 10 | @ | 11 |
| Yellow dock | | 7 | @ | 9 |

### Seeds.

| | | | | |
|---|---|---|---|---|
| Anise, Italian | ℔ lb | 9 | @ | 12 |
| German | | — | @ | — |
| star | | 23 | @ | 24 |
| Canary, Sicily | | 2¾@ | | |
| Smyrna | | 2½@ | | 2¾ |
| Spanish | | 2¾@ | | 3 |
| Caraway, Dutch | | 5½@ | | 6 |
| German | | — | @ | — |
| Cardamom, Alleppy | | 45 | @ | 80 |
| Malabar | | 65 | @ | 85 |
| Mangalore | | 60 | @1 | 50 |
| Celery | | 10½@ | | 11 |
| Colchicum | | 38 | @ | 40 |
| Clover | | 9 | @ | 11 |
| Coriander, English | | 4½@ | | 5 |
| French | | 4½@ | | 5 |
| German | | 4 | @ | 4½ |
| Cummin | | 12½@ | | 13 |
| Fennel, German | | 7 | @ | 8 |
| Fœnugreek | | 2½@ | | 3 |
| Guinea grains | | 7½@ | | 8 |
| Hemp, Russian | | 2½@ | | 3 |
| Smyrna | | — | @ | — |
| Lobelia | | 25 | @ | 30 |
| Millet, domestic | ℔ bush. | 1 10 | @ | — |
| foreign | ℔ lb. | 2½@ | | 2½ |
| Mustard, California yellow | | 3½@ | | 3¾ |
| Dutch | | 3½@ | | 4 |
| English | | 4½@ | | 5 |
| Trieste brown | | 5½@ | | 7 |
| Poppy | | 5 | @ | 5½ |
| Quince, German | | 55 | @ | 60 |
| Russian | | 28 | @ | 30 |
| Rape, domestic | | 2¾@ | | 3 |
| English | | 3 | @ | 3¾ |
| German | | 3½@ | | 3¾ |
| Timothy | | 2¾@ | | 2¾ |

### Shellac.

| | | | | |
|---|---|---|---|---|
| D. C | ℔ lb. | 21 | @ | 22 |
| Octagon B | | — | @ | 16 |
| V. S. O | | — | @ | 16 |
| Diamond I | | — | @ | 16 |
| S. S | | — | @ | 14½ |
| Garnet, A C | | — | @ | 11 |
| T. N. quality | | — | @ | 13 |
| Button | | 14 | @ | 16 |
| Bleached | | 19 | @ | 20 |

### Spices.

| | | | | |
|---|---|---|---|---|
| Cassia, Batavia | ℔ lb. | 6½@ | | |
| China | | 4½@ | | 4½ |
| Saigon, rolls | | 32 | @ | 35 |
| broken | | 25 | @ | 28 |
| chips | | 6 | @ | 8 |
| buds | | 9½@ | | |
| Cloves, prime, Zanzibar | | 16½@ | | |
| Amboyna | | 25 | @ | |
| stems | | 4½@ | | 4½ |
| Ginger, African | | 3½@ | | 4 |
| Calcutta | | 3 | @ | 3¼ |
| Cochin | | 6 | @ | 10 |
| Mace, Batavia | | 60 | @ | |
| Banda | | 65 | @ | |
| Penang | | 65 | @ | |
| Nutmegs, 110's | | 57 | @ | 58 |
| Pepper, Singapore | | 15½@ | | 16 |
| West Coast | | 15½@ | | 15¾ |
| Acheen, prime | | 14½@ | | 15¾ |
| Penang, white | | | @ | 23 |
| Singapore, white | | 25½@ | | 26 |
| red, Zanzibar | | 7¾@ | | |
| Bombay | | — | @ | 6¼ |
| Pimento, prime | | 5 | @ | 5½ |

## Chemicals.

### Heavy Chemicals.

| | | | | |
|---|---|---|---|---|
| Alkali, 36 ℔ cent | | 1 12½@ | | 1 15 |
| refined, high test | | 1 15 | @1 | 25 |
| Bleach, over 35 ℔ cent | | 1 85 | @1 | 92½ |
| Saltcake | | 50 | @ | 57½ |
| Soda ash, carb, 48 per cent | | 1 22½@ | | 1 85 |
| high test | | 1 12½@ | | 1 15 |
| natic, 40 ℔ cent | | 1 50@ | | 1 60 |
| Soda ash caustic high test | | 1 12½@ | | 1 15 |
| Newcastle, 48 per cent | | 1 22½@ | | 1 30 |
| high test | | 1 15 | @1 | 20 |
| Soda bicarb, English | | 3 10 | @ | 3 35 |
| American | | 3 00 | @ | 3 50 |
| carbonate | | 1 75 | @1 | 80 |
| caustic, 60 ℔ cent | | 2 30 | @ | 2 35 |
| 70 ℔ cent | | 2 15 | @ | 2 20 |
| 74 ℔ cent | | 2 15 | @ | 2 20 |
| 76 ℔ cent | | 2 17½@ | | 2 20 |
| sal, English | | 95 | @1 | 25 |
| American | | 95 | @1 | 20 |

### Acids.

| | | | | |
|---|---|---|---|---|
| Acid, acetic | | 2¼@ | | 2½ |
| chemically pure | | 16 | @ | 17 |
| pure | | 5½@ | | 8½ |
| oxalic | | 6½@ | | 7 |
| sulphuric, 60 deg | | 90 | @ | 95 |
| 66 deg | | 95 | @1 | 20 |
| muriatic, 18 deg | | 1 15 | @1 | 20 |
| 20 deg | | 1 30 | @1 | 50 |
| 22 deg | | 1 40 | @1 | 80 |
| nitric, 36 deg | | 4 | @ | 5½ |
| 38 deg | | 4½@ | | 6 |
| 40 deg | | 5 | @ | 6½ |
| 42 deg | | 5½@ | | 7 |
| tartaric, crystals | | 43 | @ | 44 |
| powdered | | 44 | @ | 45 |

### Ammonias, Potashes and Fertilizing Chemicals.

| | | | | |
|---|---|---|---|---|
| Ashes, pot, 1st sorts | ℔ lb. | 4 | @ | 4¼ |
| pearl | | 5 | @ | 5¼ |
| Potash, chlorate, English | | 14½@ | | 14¾ |
| powdered | | 14½@ | | 14¾ |
| carb | | 4 70 | @ | 5½ |
| caustic | | 7½@ | | 8 |
| cyanide, fused | | 39 | @ | 40 |
| sulphate of | | 1 15 | @ | 2 35 |
| Aqua ammonia (in cbys) 16% | ℔ lb. | 3½@ | | 3¾ |
| 18% | | — | @ | 4¾ |
| 20% | | — | @ | 6 |
| 22% | | 6 | @ | 7 |
| 26% | | 10 | @ | 11 |
| Ammonia, muriate | | 6½@ | | 8 |
| sal | | 8 | @ | 8½ |
| sulphate | | 3 10 | @ | 3 15 |
| Ammonias, Etc.: | | | | |
| Azotine, ℔ unit | | 2 30 | @ | 2 35 |
| Blood, dried, red, ℔ unit, west | | 2 37½@ | | 2 40 |
| low grade, ℔ unit | | — | @ | 2 35 |
| Bones, rough, ℔ ton | | 16 00 | @ | 20 00 |
| ground, ℔ ton | | 20 00 | @ | 25 00 |
| Bone black, refuse, ℔ ton | | 18 50 | @ | 19 00 |
| Kieserite | | 5 75 | @ | 6 25 |
| Menhaden guano | | 25 00 | @ | 26 00 |
| Phosphate rock, f. o. b. Charleston | | 5 00 | @ | 6 00 |
| Phosphate rock, ground | | 9 50 | @ | 9 75 |
| Acid phosphate, 14% per unit | | 75 | @ | — |
| Potash muriate, ℔ 100 lb | | 1 80 | @ | 1 85 |
| 22% S. of P. Kainit, ℔ ton | | 9 50 | @ | 10 30 |
| Manure Salts, 27@28% S. of P., per gross ton, in bags | | — | @ | 12 00 |

### Miscellaneous.

| | | | | |
|---|---|---|---|---|
| Acetate of lime, gray | | 2 25 | @ | 2 30 |
| brown | | 1 15 | @ | 1 20 |
| Alum, lump | | 1¾@ | | 1¾ |
| ground | | 1½@ | | 2 |
| Cake | | 1¾@ | | 1¾ |
| Argols, crude Oporto | | — | @ | — |
| plate | | 23 | @ | 24 |
| half refined | | 28 | @ | 32 |
| Arsenic, white | | 3 | @ | 3½ |
| red | | 5½@ | | 5¾ |
| Brimstone crude, best 2ds | | 20 00 | @ | 23 00 |
| 3ds | | 19 50 | @ | 21 00 |
| Copperas, ordinary | | 50 | @ | 57½ |
| best grades | | 75 | @1 | 00 |
| powdered | | 1½@ | | 1¾ |
| Cream tartar, crystals, 99 p. c | | 32 | @ | 32¾ |
| powdered, 99 p. c | | 32¾@ | | 33½ |
| Glauber salts | | 75 | @ | 80 |
| Epsom salts | | 1 15 | @ | 1 20 |
| Nitrate of lead | | 9 | @ | 10 |
| soda | | 2 12½@ | | 2 20 |
| Rochelle salts | | 28 | @ | 30 |
| Sugar lead, brown | | 7½@ | | 8 |
| white | | 13 | @ | 13½ |
| Saltpeter, crude | | 5 | @ | 5½ |
| refined | | 6 | @ | 8 |
| Vitriol, blue ordinary | | 5½@ | | 6 |
| extra | | 6 | @ | 6¼ |

## Dyestuffs.

| | | | | |
|---|---|---|---|---|
| Acid picric best crystals | ℔ lb. | 50 | @ | 55 |
| Albumen prime egg | | 60 | @ | 65 |
| imported blood | | 16 | @ | 16½ |
| domestic blood | | 15 | @ | 16 |
| No. 1½ blood | | — | @ | — |
| Alizarine | | 18½@ | | 20½ |
| Annatto | | 12 | @ | 25 |
| seed | | 10 | @ | 16 |
| Archil weed | | 7 | @ | 15 |
| Aurine | | 58 | @ | — |
| Barbary root, cut | | 4 | @ | — |
| Bichromate of potash, Scotch | | 10½@ | | 11 |
| American | | 10½@ | | 11 |
| Bichromate of soda | | 8½@ | | — |
| Carmine of indigo | | 40 | @ | — |
| Cochineal, Teneriffe silver | | 30 | @ | 32 |
| black | | 30 | @ | 32 |
| gray black | | 33 | @ | 35 |
| Mexican | | — | @ | — |
| ammoniac | | — | @ | 37 |
| Cudbear, French | | 2 | @ | — |
| concentrated | | 25 | @ | — |
| English | | 12 | @ | 30 |
| Cutch, slab | | 7½@ | | 8 |
| bag | | 6½@ | | 6½ |
| Dextrine | | 5½@ | | 6 |
| Divi divi | ℔ ton. | 40 00 | @ | |
| Fullers earth, lump | ℔ lb | 90 | @ | 95 |
| powdered | | 1¾@ | | 2 |
| Flavine | | 21 | @ | 23 |
| Fustic stick | ℔ ton | 23 00 | @ | 25 00 |
| Gambier | ℔ lb | 6¾@ | | 7½ |
| Garancine | | 8½@ | | 9 |
| Indigo, Bengal, low grade | | 78 | @ | 85 |
| medium | | 1 10 | @ | 1 25 |
| high grade | | 1 25 | @ | 1 40 |
| Caracas | | — | @ | — |
| Kurpahs | | 75 | @ | 1 05 |
| Gautemalas | | 70 | @ | 80 |
| Manila | | 70 | @ | 75 |
| Madras | | 65 | @ | 85 |
| Indigotine | | 3 00 | @ | 4 00 |
| Lac dye | | 9 | @ | 15 |
| Logwood stick | ℔ ton | 35 00 | @ | 40 00 |
| Madder, Dutch | ℔ lb | 7½@ | | 8 |
| French | | 5 | @ | 7 |
| Myrobalans | | 2 | @ | 2½ |
| Muriate of tin | | 10 | @ | 15 |
| Nitrate of iron, commercial | | 2 | @ | 3 |
| true | | 5 | @ | 6 |
| Nutgalls, blue Alleppo | | 14½@ | | 15½ |
| Chinese | | 15 | @ | 16½ |
| Oxymuriate of antimony | | 4 | @ | 6 |
| Persian berries | | 15 | @ | 17 |
| Prussiate of potash, Am. yellow | | — | @ | 19 |
| red | | 42 | @ | 45 |
| Scotch yel. | | 19 | @ | 20 |
| red | | 42 | @ | 45 |
| Prussiate of soda | | 17½@ | | 18 |
| Phosphate of soda | | 7 | @ | 8 |
| Safflower | | — | @ | — |
| Sago flour | | 3½@ | | 3¾ |
| Salts of tartar | | 6¾@ | | 7 |
| Soluble oil | | — | @ | 6 |
| Sumac, Sicily prime | ℔ ton. | 57 00 | @ | 70 00 |
| Virginia | | 45 | @ | 50 |
| Starch, corn | ℔ lb | 2¾@ | | 3½ |
| potato | | 4½@ | | 4¾ |
| wheat | | 5½@ | | 6 |
| Stannate of soda, 40% soluble | | — | @ | 12 |
| 25% soluble | | — | @ | 9 |
| 20% soluble | | — | @ | 8 |
| Tin crystals | | 16 | @ | 20 |
| Turmeric root, Alleppy | | 3 | @ | 3½ |
| Bengal | | — | @ | — |
| Corringa | | 3 | @ | 3½ |
| powdered | | 5 | @ | 6 |
| Ultramarine, imported | | 20 | @ | 30 |
| American | | 5 | @ | 16 |
| Vanadiate, ammonium | | 90 | @1 | 00 |
| Woad, English | | 9 | @ | 10 |
| Coal Tar Colors: | | | | |
| Alizarine | | 19 | @ | 20 |
| Aniline oil | | 20 | @ | 25 |
| salt, crystals | | 16 | @ | 18 |
| cake | | 20 | @ | 21 |
| Bismarck brown | | 80 | @1 | 20 |
| Eosine | | 2 40 | @ | 3 00 |
| Fast red | | 50 | @ | 65 |
| Fast yellow—acid | | 75 | @1 | 50 |
| Fuchsine crystals | | 1 25 | @1 | 75 |
| Hoffman's violet—3B | | 1 75 | @ | 2 50 |
| Methylene blues | | 4 50 | @ | 6 75 |
| Methyl violets—2R | | 1 50 | @ | 2 00 |
| 2B | | 1 50 | @ | 2 00 |
| B | | 1 50 | @ | 2 00 |
| Nicholson (alkali) blue—3B | | 2 25 | @ | 3 00 |
| 5B | | 3 75 | @ | 4 00 |
| Red shade | | 2 00 | @ | 2 25 |
| Nigrosine | | 1 35 | @ | 2 00 |
| Orange A—II | | 40 | @ | 65 |
| Safranine | | 1 75 | @ | 2 25 |
| Scarlet R | | 45 | @ | 55 |
| RR | | 50 | @ | 65 |
| RRR | | 70 | @ | 75 |
| Soluble blue—green shade | | 2 00 | @ | 3 50 |

These prices are for colors of standard purity in original packages. Reduced colors can be obtained at irregular and very much reduced figures.

| | | | | |
|---|---|---|---|---|
| Chipped Dyewoods, Etc.: | | | | |
| Barwood | ℔ lb | 1¾@ | | 2¼ |
| Camwood | | 4¼@ | | 8 |
| Fustic, com | | 1¾@ | | 1½ |
| Cuban | | 1½@ | | 1¾ |
| Green ebony | | 3½@ | | 4 |
| Hypernic | | 3½@ | | 4¼ |
| Logwood, Campeachy | | 2 | @ | 2¼ |
| Laguna | | 2 | @ | 2½ |
| Nicwood | | 2 | @ | 3 |
| Peachwood | | 3½@ | | 3¾ |
| Quercitron | | 1½@ | | — |
| Redwood | | 2 | @ | 3 |
| Red sanders | | — | @ | 3 |
| Extracts: | | | | |
| Archil | ℔ lb | — | @ | 33½ |
| concentrated | | 21 | @ | — |
| Black oak | | 23½ | @ | 28¾ |
| Barberry, French | | 26 | @ | 30 |
| Chestnut | | 5½@ | | — |
| Chestnut oak | | 3½@ | | — |
| Refi'd sedimentless hemlock | | 4½@ | | 6 |
| Prime hemlock | | 3½@ | | 4 |
| Fustic, solid | | 10½@ | | — |
| liquid, 51 deg | | 8 | @ | — |
| Indigo extract | | 7½@ | | — |
| Logwood, solid | | 10 | @ | 11 |
| liquid, 51 deg | | 6½@ | | 7 |
| 42 deg | | 5½@ | | 5¾ |
| Persian berries, French | | 22 | @ | — |

## COMPARATIVE PRICES.

| Chemicals. | 1887. | 1886. | 1885. |
|---|---|---|---|
| Bleaching powder | 1 95 | 1 60 | 1 75 |
| Caustic soda, 70% | 2 35 | 2 50 | 2 60 |
| Caustic soda, 60% | 2 52½ | 2 75 | 2 80 |
| Sal soda | 97½ | 85 | 1 05 |
| Soda ash, 48% carb | 1 22½ | 1 25 | 1 35 |
| Soda ash, 48% caustic | 1 20 | 1 20 | 1 30 |
| Soda ash, 48-58% N. C | 1 10 | 1 25 | 1 30 |
| Soda alkali, 58% B. M | 1 20 | 1 20 | 1 35 |
| Soda nitrate | 1 82½ | 2 05 | 2 30 |
| Brimstone | $30 00 | $21 00 | $22 00 |
| Cream tartar | 34¼ | 34¼ | 33¾ |
| Muriate of potash | 1 70 | 1 67½ | 1 67½ |
| Chlorate of potash | 15¼ | 16¼ | 18¼ |
| Kainit | 7 25 | 6 99 | 6 75 |
| Paints. | | | |
| White lead in oil | 6¼ | 7 | 6¼ |
| Litharge | 5½ | 5½ | 5 |
| Paris green | 18 | 16 | 16 |
| Orange mineral | 7¾ | 8 | 8¼ |
| Ven. red, English | 1 40 | 1 40 | 1 40 |
| Ven. red, American | 1 00 | 1 00 | 1 25 |
| Barytes | $16 00 | $18 50 | $16 00 |
| Whiting, Commercial | 45 | 35 | 37½ |
| Drugs. | | | |
| Opium | $4 40 | $2 75 | $3 45 |
| Morphine, domestic | 3 10 | 1 80 | 3 00 |
| Quinine, German | 58 | 48 | 68 |
| Quinine, domestic | 40 | 50 | 68 |
| Cinchonidia, domestic | 8 | 8 | 14 |
| Alcohol | 2 03 | 2 12 | 2 10 |
| Borax, city | 6¼ | 6¼ | 8 |
| Beans, tonka (Ang) | 1 35 | 1 55 | 1 90 |
| Cubebs | 1 00 | 75 | 65 |
| Cuttlefish | 19½ | 12½ | 14½ |
| Glycerine, American | 19½ | 15½ | 15¾ |
| Oil, castor, city cs | 17 | 17 | 17 |
| Oil, codliver, Nor | 27 00 | 25 00 | 34 00 |
| Quicksilver | 53 | 48½ | 42 |
| Oil, bergamot | 2 37½ | 2 00 | 1 70 |
| Oil, cassia | 65 | 82½ | 80 |
| Oil, cubebs | 10 00 | 8 00 | 6 50 |
| Oil, lemon | 1 15 | 1 75 | 70 |
| Oil, peppermint, tins | 2 00 | 2 75 | 3 90 |
| Oil, sassafras | 43 | 35 | 38 |
| Aloes, cape | 5¾ | 7 | 8½ |
| Asafœtida | 9 | 11½ | 13 |
| Gum arabic, 1st picked | 92½ | 82½ | 50 |
| Gum arbic, sorts | 57½ | 32 | 26 |
| Camphor | 22½ | 23 | 22 |
| Shellac, D C | 19½ | 18 | 19½ |
| Senna, Alex. Nat | 29 | 27½ | 11½ |
| Gentian root | 3¾ | 4½ | 4¾ |
| Ipecac | 1 25 | 82½ | 82½ |
| Canary seed, Smyrna | 2½ | 2¾ | 2¾ |
| Caraway seed, Dutch | 6½ | 7 | 11 |
| Coriander, English | 5 | 5 | 5¾ |
| Hempseed | 2 | 2½ | 2¾ |
| Mustardseed, Cal. yel | 4½ | 5½ | 6 |
| Mustards'd, Trieste, br | 7 | 5½ | 5½ |
| Rapeseed, English | 4 | 4½ | 4¾ |
| Rapeseed, German | 3¼ | 4 | 3½ |
| Oils. | | | |
| Linseed, domestic | 46 | 43 | 47 |
| Cottonseed, prime S. Y | 40 | 40 | 37 |
| Olive, Sicily | 68 | 77 | 78 |
| Palm, prime | 4½ | 5 | 6½ |
| Cocoanut, Ceylon | 5½ | 5½ | 6¼ |
| Lard, prime city | 54 | 57½ | 51 |
| Menhaden, prime cde | 20 | 21½ | 25 |
| Whale, bleached win'r | 40 | 41 | 53 |
| Sperm, bleached win'r | 71 | 85 | 95 |
| Paraffine, 25 gravity | 8 | 9 | 10½ |
| Neutral, 34 gr. b'less | 13 | 16 | 18 |
| Black, 29 gr. 15° | 8 | 7½ | 9 |
| Cylinder, 600° | 15 | 15 | 20 |
| Oil cake, western | 21 75 | 25 50 | 29 00 |
| Spirits turpentine | 32¾ | 34½ | 34½ |
| Dyestuffs. | | | |
| Cochineal, Teneriffe S. | 30 | 30 | 29 |
| Cutch | 7¾ | 6½ | 5½ |
| Gambier | 5½ | 4¾ | 5 |
| Indigo, Bengal h grade | 1 25 | 1 45 | 1 40 |
| Bichromate potash | 10¼ | 9¾ | 9¾ |
| Prussiate potash, yel | 19 | 19 | 21½ |
| Sumac, Sicily prime | 70 00 | 72 00 | 88 00 |
| Starch, west'n corn bls | 3¼ | 3¼ | 3¾ |

called, are therefore closely planted with a small broad-topped leguminous tree. As in the case of coffee, these leaves have a better color, and as for local use their appearance affects their value, this is an advantage. The sun-grown leaves, however, give a better yield of total alkaloids, and Dr. Warden's analyses point in the same direction. It is believed that judicious manuring would largely increase the alkaloids, and in the paper under notice the use of some fertilizer containing potash is suggested, as it was in our previous article. It is usually considered unadvisable in cultivation of this kind to manure at all before the tree is about four years old, and it can be only required where, as in the case of some of the samples examined, old tea land had been planted up. The orthodox method of drying the leaves is to put them in the sun, but no bad results were found to arise from the plan adopted at Arcuttipore; the leaves were first withered in the shade, and then dried in a tea dryer at a temperature of 150° F. The object which Dr. Warden thinks should be kept in mind is "to dry the leaves as thoroughly and quickly as possible, at the lowest temperature." As soon as they are cold, the dried leaves should be packed in air-tight boxes to prevent them absorbing damp.

The only way in which the extract of the Indian grown leaves differed from any other was that Dr. Warden could not get it to form a crystallizable salt. However, the solution he prepared was reported on by Dr. Saunders who tried it in thirteen operations for cataract, and declared that as an anæsthetic upon the eye it was perfect. There can then be no doubt as to the activity of the alkaloid obtained from Indian coca, and as the shrubs mature no doubt a larger percentage of it will be found in the leaves. But the question of the commercial value of the leaves to planters is a different matter. Unless the leaves come into general use for some other purpose than medicine,—and there seems at present little probability of this,—its use must be very limited. Firms in Calcutta connected with the tea enterprise seem to have taken a great deal of interest in the new product, and to have introduced it in most of the planting districts. It might be worth while for planters to make a few trial shipments in small lots. As far, however, as we can judge, the market could be just now swamped by parcel post.—*Madras Mail.*

## Extensive Culture of High Quality Cinchonas in Java.

An Amsterdam correspondent of the *Tropical Agriculturist*, named J. L. Van Son, communicates the following important letter to that paper:

"I find that your estimate of about 60 cinchona plantations in Java is about right, but you are wrong when you think they have on an average 200 acres of cinchona. You can depend on it that the average is not less than 250 bouws, or about 440 acres, most all planted with ledgerianas and hybrids. I do not know one estate of less than 350 acres, but more than 35 of over 500 acres. Besides these, the government plantations.

These estates are now for more than half the extent all grafted with such ledgerianas and hybrids, all over 10 per cent sulphate of quinine, and a large acreage over 13 per cent. There are even gardens of over 18 per cent.

The age of these varies now from 3 to 1 year old. One and one-half year old grafts of 10 per cent have showed by analysis over 6 per cent sulphate of quinine.

What has not been grafted as yet are trees from 7, 6 and 5 years old, of which the bark contains more than 3 per cent, in many cases over 5 per cent. You have only to look over the market reports of cinchona bark sales in Amsterdam, to see that I am right. The total acreage of cinchona ledgeriana sand hybrids is thus 60 by 225 bouws, or 15,500 bouws of 25,500 acres. The cinchona succirubra I do not take into consideration for the present. These 15,500 bouws at 2,000 trees per bouw, gives 31,000,000 trees.

In six years' time these trees will yield stem and root bark of over 10 per cent. You will rather be astonished at my adding root bark, but this is a fact. I need not enlighten you though on this subject. I do not wish to say what amount in pounds of bark, Java will export before and after the next five years, so much depends on what each individual owner of each plantation will do. It is easy, however, to calculate what they can do.

Now taking the annual consumption of sulphate of quinine at 400,000 pounds and the increase for the next five years at 200,000 pounds or 50 per cent. (which I sincerely hope will be the case, but do not expect), it would give a result of 600,000 pounds of sulphate, or at 10 per cent. barks, a production of only 6,000,000 pounds of bark to supply and meet the world's consumption.

This Java alone will be able to do, and will do if necessary. And as there is more cinchona in the world than in Java alone, as all cinchona growers have learned to their cost, but mostly of inferior quality, it will consequently force the price of the unit down to a limit, which will only leave a profit to rich barks.

At the same time, before the next five years all cinchona growers will still be able to command a profitable price for barks of 3 per cent. and even 2 per cent. if they do not swamp the market.

At present Ceylon planters can still do us much harm, but not without spoiling their own market- but if they restrict their export to say 8 million lbs. a year for the next years, all concerned will benefit by it.

I was very sorry to hear from you that one of our planters, who visited you a short time ago, should have given you a wrong impression about the extent of Java cinchona cultivation, the more so as it appears that this has influenced your large exports. Should any of your planters wish to see for himself, I recommend him to visit the following plantations: Pasir Telagawarna, Goenoeng, Melattie, Soeka, Negara, Tjitiss, Tjiseurek, Tjipantjoe, Soekawarnak, Lodaja, Kartamanak; and I am convinced he will draw the same conclusions as I do.

The average price of reaping, drying, packing, and railway freight to Tandjong Priok (the harbor), that is to say f. o. b., cost us in Java, about 9 cent per kilo, or a little under 1d a lb.

Freight to England or Holland, expenses on sale &c., will, I dare say, be about the same to you as to us.

## Detecting Adulterations in Olive Oil.

REPORT OF U. S. CONSUL MASON.

Southern France has of late years suffered seriously from the adulteration, or rather the artificial fabrication, of her two principal agricultural products, wine and olive oil. During the recent season of scanty vintages there has grown up in this district an immense manufacture of "piquettes," or raisin wines, which are made by soaking in water until fermentation takes place, the cheap dried grapes which are imported in vast quantities from the Grecian Archipelago and Turkey. These substitutes have so far replaced the real but more costly French wines that now—since the replanted vineyards begin to yield more abundantly—the genuine ordinary wines command only prices which hardly repay the cost of culture.

The consumption of vinous beverages among the laboring classes has not diminished, but the cheaper substitute has crowded out the real article, and in behalf of the agricultural class it is proposed to remedy this unnatural difficulty by putting a heavy import duty upon dried grapes from the Levant.

With olive oil the case is similar, but even worse. Only a small portion of France is adapted to olive culture, the entire available district being a strip of dry country less than 200 miles wide along the Mediterranean coast. The tree is of slow growth and is, moreover, beset by numerous insects and diseases, which, in addition to unfavorable phases of weather, render the yearly olive crop more or less uncertain. Any serious reduction in the annual consumption of olive oil is sufficient to reduce its market value below the point of profitable culture. This has been done by the now nearly universal practice of adulterating or diluting the olive oils of Nice and Provence with various seed oils, viz: Sesame, peanut, poppy-seed, cameline, and especially cottonseed, which last, by reason of its cheapness, palatable flavor, and difficulty of detection, has of recent years nearly supplanted all the others as an adulterating material.

The rank, low-priced olive oils from southern Italy (Bari), Algeria, and Tunis have been brought here in vast quantities, diluted with cotton or sesame, and been consumed and exported wholesale in place of the fine, delicate, high-grade oils of the Var and Bouches du Rhone, which have thus been nearly elbowed out of the market. This has so reduced the value of olive oil in southern France that the government has set itself seriously to the task of providing a remedy. The first step was to discover some method of detecting such adulterations which should be not only exact in its results, but sufficiently simple to be practicable for farmers, dealers and ordinary consumers. It was stated in a report which was made from this Consulate in February, 1888, that no such process was then known. As late as the 17th of May last a meeting of the Scientific and Industrial Society of Marseilles was addressed by Mr. Ernest Milian, an accomplished analytical chemist, who reviewed elaborately all of the known processes, and admitted that none of them were sufficiently delicate and exact to detect an adulteration of less than 10 per cent. The "Cailletet" process, which consists in treating the oil with a mixture of sulphuric and nitric acids, has been hitherto generally employed, but this was declared by Mr. Milian untrustworthy unless the degree of adulteration exceeded 20 per cent.

The "Bechi" process, now used by the Italian Government, will detect an admixture of 15 per cent. of cottonseed oil, provided the sample analyzed contains no glycerine, formic acid, or free fatty acids, any one of which, even in minute quantity, is sufficient to mask the chemical reaction upon which the process of Signor Bechi depends.

Mr. Milian then described a new method, invented by himself, which consists in treating with beat the saponified products of the oil in alcoholic solution with nitrate of silver. This, however, is a process for the laboratory of the accomplished chemist, and is not adapted to general use. The same is true of the "Levallois" process, which has been used by experts in cases of real importance with more or less questionable results, the analysis in one notable instance having given the same result from a sample of pure olive oil and another which was known to contain 20 per cent. of cottonseed.

Finally: as it would seem, the long-sought-for process has been discovered by Mr. Brulle, chemist of the Agronomic Station at Nice. His discovery was announced to the Academy of Sciences in April last and has been since subjected to an elaborate series of tests and experiments by a commission specially appointed for the purpose by the Agricultural Society of the Alpes-Maritimes.

Mr. Brulle began upon the known principle that vegetable oils, when oxidized by the application of certain acids, assume different shades of color. He then hit upon the use of albumen to fix and accentuate these delicate graduations of tint. The report of the commission has recently been published and gives the process of Mr. Brulle such complete and unqualified endorsement, both for its simplicity and the exactness of its results, that the subject assumes a practical importance not only to the countries which produce olive oils but to those which, like our own, import them as costly luxuries for general consumption.

In its series of experiments at Nice the commission first applied the process of Mr. Brulle to six classes of samples, viz., first, to pure olive oil, then to the same oil with an added admixture of 5, 10, 20, and 50 per cent., respectively, of cottonseed oil, and finally, to the pure cottonseed oil itself. When the result had been established by repeated experiments with each grade of samples, a fac simile of the tint produced by each successive degree of adulteration was prepared by dissolving certain aquarelle pigments in stated quantities of water. Thus the process and a standard system of proofs was put within reach of any person having a good eye for color and a slight familiarity with chemical manipulations.

THE NEW PROCESS.

The process of Mr. Brulle is as follows: Put into a test tube 1½ grains of pure albumen (this should be gently heated in the flame of an alcohol lamp to expel any remaining moisture in the albumen which might otherwise modify the exactness of the result), then add 3 cubic centimeters of nitric acid and 10 cubic centimeters of the oil to be tested (the quantity of each ingredient used is, of course, immaterial, provided the above relative proportions are maintained; a test tube graduated metrically is the most convenient for the purpose), the mouth of the tube is then closed with a cork to prevent the boiling over of the liquid during ebullition, but pierced with a small orifice to permit the escape of vapor which would otherwise explode the tube. The materials are mixed by shaking, but the nitric acid quickly settles to the bottom. Now warm gently in the lamp the part of the tube containing the oil, then apply the flame to the underlying stratum of acid. A fierce ebullition soon ensues, and when this is at its height plunge the tube into ice water sufficiently cold to chill the contents to 4° centigrade, or its equivalent 40° Fahrenheit. During the cooling process there is developed an oleaginous precipitate, ranging in color from pale yellow to reddish-brown, according to the proportion of cotton oil contained in the tested sample. The experiment requires only the simple apparatus above mentioned, and occupies only four or five minutes.

The findings of the commission at Nice are tabulated in its official report, as follows: The standard tint in each grade being produced by dissolving the stated number of units of each pigment named in 100 units of water. For this purpose ordinary dry cake water colors are most convenient.

1. Pure olive oil yields a precipitate tinged like 5 units of Naples yellow dissolved in 100 units of water.

2. Olive oil containing 5 per dent. of cotton oil yields the tint of 5 units Naples yellow and 5 units of dark chrome yellow in 100 units of water.

3. Olive oil containing 10 per cent. cottonseed yields a tint equal to 20 units Naples yellow, 6½ units chrome yellow, and 1 unit Chinese vermilion, in 100 units of water.

4. Olive oil containing 20 per cent. cottonseed yields a tint equal to 6½ units Naples yellow, 6 units chrome yellow, and 1½ units Chinese vermilion, similarly dissolved.

5. Olive oil with 50 per cent. cotton oil yields a tint equal to 5 units Naples yellow, 5 units chrome yellow, and 5 units vermilion.

6. Pure cotton oil yields a precipitate having the color of 3½ units chrome yellow, 10 units of vermilion, 1 unit of burnt sienna and 1 of natural sepia, in 100 units of water.

Other seed oils, including sesame, cameline, peanut, and poppy seed, give a precisely similar series of tints in proportion to the degree of their admixture with olive oil, except that the colors are more inclined to the reddish shade, which would be produced by covering the corresponding cottonseed tint with a thin wash of carmine.

These gradations of color are most marked when the liquid in the tube is at about the stated temperature, 40°F. As the precipitate is further chilled to the freezing point, the colors fade and lose their individuality.

Such is the system which it is now expected will enable purchasers and consumers of olive oil in this country to detect the adulterations, which have become so general that very few brand or firm names are any longer a guarantee of purity. When it is remembered that more than 2,000,000 gallons of cottonseed oil are exported from the United States to Marseilles in a single year, and that more than half of this vast quantity is used for adulterating olive oils, a large part of which are re-imported to the United States through a 20 per cent. duty, the importance of some new and better means of controlling the integrity of this trade will be apparent.

Two weeks ago 1,000 tierces of American lard were stopped at the wharf in Marseilles and the consignees subjected to a costly process, which is not yet terminated, because the lard was found upon analysis by the customs officers to contain 10 per cent. of cottonseed oil.

This seizure was based upon the fact that, while lard is entitled to entry duty free, cottonseed oil bears a duty of 6 francs per 100 kilograms, and this adulteration of a free article with a dutiable one is held to be fraudulent. The least that can happen to the shippers in this case will be that they must pay the duty on 100 tierces of cottonseed oil and the expenses of the process, besides the loss which the consignee suffers from the delay. Might not this rigid scrutiny be equally well applied to some of the adulterated and falsified foreign products which are landed at American ports?

It is not within the scope of this report to consider whether either lard or olive oil, when adulterated with cottonseed, is necessarily unwholesome. The vital fact is that in paying from 40 to 50 cents per kilogram and 30 per cent. duty on American cottonseed as olive oil, the people of the United States are submitting to a wholesale fraud, the proportions of which are increasing year by year.

The interests of both the United States and France will be subserved when this reckless tampering with the integrity of commerce is systematically suppressed. As long as our people will accept and pay for adulterated oils they will continue to flood and dominate the market. The remedy must be applied at our ports of entry.—Maaseilles, July 31.

## Drug Trade in New Orleans.

In an annual review of business the New Orleans *Times Democrat* says,

"In the past fiscal year we are pleased to note a steady progressive forward movement both in importing and exporting branches of the wholesrle drug trade. The distributing demand from this port throughout the Southern States has also shown a material increase. Comparing our data last season with present figures, we find the total of our imports of drugs, essential oils, patent medicines, English, French anc German chemicals, pomades, floral waters and druggists' sundries and utensils show an increase of over 10 per cent. over the same period of 1887. In exports we have reached the United States of Columbia, with its several ports, and have continued to extend our relations with Guatemala, British and Spanish Honduras, as well as to continue our inroads upon the trade of Mexico,

The domestic markets in the far West, with the opening of the road to Denver, and low freights, we have found a ready market for foreign goods lately dealt in by all drug importers. The trade with Colorado is making demands upon us for those products of the Old World which they have heretofore obtained from New York. Shipments of drugs from this city to the Pacific slope have also become a very important feature, as well as to New Mexico and Arizona, while the distributing demand on regular shipments continues throughout Texas, Arkansas, Mississippi, Alabama, Tennessee, Florida, Louisiana and Georgia. It is safe to assert that drug lines here in many fields are far in the lead of other branches of trade, with the brightest prospects for the future.

The sales in the United States of America from this port are over $3,000,000, showing a continued increase in the volume of trade. Ocean freights from all portions of Europe being greatly in favor of this city, and with a continued impetus being fully exerted, we see no reason why this city should be outranked by any American city as a drug port of entry or for export purposes. Interior druggists will find themselves greatly benefited to compare figures of our drug importers with those of New York and other Northern cities. Freight rates to most of the Southern and Western jobbing points being in our favor, should make it additionally advantageous to dealers to make this their drug market.

## Detection of Ceresin in Beeswax.

Hager recommends the following process for the detection of ceresin in beeswax:

0·2 grms. of the wax are liquefied by heating in a small test tube, 9 cm. long and 1·2 cm. in diameter, and then dissolved by gently agitating with 5 cc. chloroform. The tube is then corked and set aside at a temperature of 17-18° C for two hours. With pure beeswax the solution remains clear at the end of this time, while in the presence of the ceresin, the solution which is also clear when hot, becomes covered with a white turbid layer, from 1-3 mm. in thickness on cooling. If the tube is tightly closed this layer will remain for 24 hours. Other adulterants, with the exception of Japanese wax, show no similar behavior, it being characteristic of ceresin.

Beeswax adulterated with Japanese wax shows a similar behavior, for the turbid layer is not milky at the end of two hours, but consists of flakes, some of which penetrate the lower layer. In this case the surface of contact with the two layers is not so well defined.

To distinguish between beeswax and ceresin in addition to the density, a solution in chloroform may be prepared as described above The ceresin solution is turbid while warm, and when left at a temperature of 16-17°C, forms lower clear layer, and an upper milky layer Beeswax gives a perfectly clear solution. This test is applicable to yellow and white beeswax and yellow and white ceresin.—*Stiffen.*

# Herf & Frerichs Chemical Co

Manufacturing Chemists,

## St. Louis, Mo.

MANUFACTURERS OF

C. P. Acids, Ammonium Benzoate, Bromide, Iodide, Muriate gran. pure, Amyl. Nitrite Bismuth Oxychloride, Salicylate, Subnitrate, Cerium Oxalate, a kinds of Ether.

**HYDROCHINON,**

Iron preparations, all Scale Salts, Potassium Acetate Bromide, Chlorate pure gran., Cyanide, Iodide, Silicate Soda, Sodium Acetate, Benzoate, Bromide, Iodide, Phosphate, Salicylate. Zinc Acetate, Chloride, Iodide, Sulphate

*AND A GENERAL ASSORTMENT OF*

Pharmaceutical, Photographic & Technical Chemicals.

EASTERN AGENTS

**Schoellkopf, Hartford & Maclagan,**

(LIMITED.)

3 Cedar St., NEW YORK.

---

**HOLLINGSWORTH & PETERSON.**

Brokers in Chemicals, 49 North Front St., Philadelphia

Representing WING & EVANS, of New York, for the sale of

**PURE ALKALI, 48 & 58 per cent.**

MANUFACTURED BY

BRUNNER MOND & CO., England. SOLVAY PROCESS CO. Syracuse N. Y.

---

# Jarrow Chemical Company,

**NEWCASTLE ON TYNE.**

Bleaching Powder, Caustic Soda, Sal Soda

Carb Soda Crystals, Soda Ash, all tests, Bi-Carb Soda.

**Edward Hill's Son & Co., Agents,**

25 & 27 CEDAR STREET, NEW YORK.

---

# WING & EVANS

Commission Merchants.

54 WILLIAM STREET, NEW YORK.

Soda Ash, Sal Soda, Caustic Soda, Bleaching Powders

AGENTS FOR

**BRUNNER, MOND & CO.**

**SOLVAY PROCESS CO.**

**C. ALLHUSEN & SON.**

**W. PILKINGTON & SON.**

**HAY GORDON & CO.**

---

# JAMES LEE & CO.

COMMISSION MERCHANTS,

72 PINE STREET, NEW YORK.

IMPORTERS OF

Soda Ash, Caustic Soda, Sal Soda, Bleaching Powder, Salt Cake, Oxide Manganese, Chloride Manganese, Potash Alum, Sulphate Morphia, Carbonate Potash, Hyposulphite of Soda.

SOLE AGENTS IN THE UNITED STATES FOR

**Charles Tennant & Co.,**

---

# Edward Hill's Son & Co.,

**25 and 27 Cedar St., New York.**

Caustic Soda, Bleaching Powder, Soda Ash, Carbonated Crystals, Sal Soda, Bicarb Soda,

Caustic Potash, Carbonate Potash, Chlorate Potash,

**ARSENIC.**

Cocoanut Oil, Coylon. Cocoanut Oil, Cochin. Palm Oil, Citronella, Fisher's Brand Cookson's Ven. Red, Orange Mineral,

Blundell, Spence & Co.'s Paints and Colors.

**Fratelli De Pasquale & Co.'s**

**ESSENTIAL OILS,**

LEMON, BERGAMOT AND ORANGE, GUARANTEED PURE.

---

# PURE ALKALI.

## Manufactured by the Ammonia Process.

**This Alkali contains 58 per cent. of Alkali or nearly 99 per cent. of Carbonate o Soda. It is the most economical form of Soda for Manufacturers of Soap, Glass, Paper, Wood Pulp and Colors, and for Printers and Bleachers.**

CRESCENT BRAND TRADE B.M.&Co. MARK

MANUFATURED BY

## BRUNNER, MOND & CO.,

LIMITED,

NORTHWICH, ENGLAND.

AND

## SOLVAY PROCESS CO.,

SYRACUSE. NEW YORK.

CRESCENT BRAND TRADE B.M.&Co. MARK

TRADE MARK

THE SOLVAY PROCESS CO. will make by this same process an Alkali adapted for Window Glass Makers testing 48 per cent.

## WING & EVANS, 54 WILLIAM STREET, NEW YORK, Sole Agents for the United States.

WING & EVANS have appointed as exclusive Sale Agents KINDER & MEYER, BOSTON, for New England States who are prepared to contract for future delivery

## CHEMICAL MARKET.

**Note**—*Our prices are for large lots except when otherwise specified, and buyers of small quantities must expect to pay an advance on these figures.*

*The prices current will be found on page 50.*

### Heavy Chemicals.

TUESDAY EVENING, Sept. 4, 1888.

We have to chronicle another quiet week in the chemical trade of this center. Since it was voted not to resume operations until October 8th the glass manufacturers have withdrawn from the market as buyers of chemicals for future delivery, and they are not expected to again figure as purchasers to any extent until toward the end of the current month. Other consumers are buying from hand to mouth, but as stocks of all descriptions on the spot are small there is no pressure to sell, and the market maintains a steady tone. Messrs. J. P. Brunner & Co. write us from Liverpool on the 24th ult.: "The principal feature here is the sudden activity developed in chlorate of potash, other articles attracting little attention. Soda ash is firmly held, owing to scarcity, and we quote: Caustic ash, 48%, 15-16@1d, high test 51-52@1d, carb. ash 51-52@1d, high test 51-52@1d. Soda crystals are in moderate demand at £2 10s. Caustic soda shows signs of weakness, and some resales of 70% have been made at £6 10s, while makers hold for 1s 3d to 2s 6d more money. For 74% there is a fair inquiry, but not much actual business, buyers' and sellers' ideas of values being a little apart. Some business has been done in 70% over all 1889, on private terms. We quote, for prompt delivery: 60% £5 11d 3d@£5 12s 6d, 70% £6 11s 3d@£6 12s 6d, 74% £7 1s 3d@£7 2s 6d, 76% £8@£8 5s. Bleaching powder is still very scarce, and £7 10@£7 12s 6d are nominal quotations; but buyers are not anxious to operate, and prefer to look on rather than pay these figures. Chlorate of potash, after a long period of depression, has at last taken a turn and a large business has been done for prompt and forward delivery at 5d, which figure is now being refused. Stocks have been materially reduced, and most makers are not inclined to go on for the present. In some cases holders now talk of 5½d. Bicarbonate of soda is quiet at £4 10s@£4 15s, according to brand and quantity."

Carbonated soda ash of Liverpool manufacture is without special feature of interest. For 48% there is a moderate jobbing demand but futures are neglected at present and are not likely to receive much attention until the glass manufacturers are again in the market. Small stocks keep the spot market firm and the scarcity and high cost of freight room has the same effect upon futures. We quote nominally 1 25@1 27½c as to quantity and brand for goods to arrive or for shipment and 1 30@1 35c for small lots from store.

Caustic soda ash is quiet, small sales of lots from store making up the bulk of current business. Prices are steady and without quotable change, dealers quoting 1 22½@1 25c for lots to arrive and 1 25@1 30c on the spot, according to quality.

Refined alkali is without particular animation, buyers for the present confining their attention to such lots as they require for current consumption. For 58% the nominal quotations remain 1 15@1 17½c but large buyers could no doubt do better, as there are low sellers in Boston. In 48% there is little doing and 1 22½@1 25c as to quantity is still quoted.

Caustic soda is dull and since we last wrote only a few small jobbing sales have come under our notice. Holders maintain their previous quotations of 2 30@2 35c for 60%, 2 17½@2 20c for 70% and 2 15@2 17½c for 74%.

English sal soda sells fairly in accordance with the current necessities of consumption, but there are no important transactions to record. Prices in the absence of such are more or less nominal and we continue to quote 92½@95c for lots to arrive and 95@1c for stock on the spot according to seller and size of order.

Bleaching powder is still neglected by large buyers and only a moderate jobbing business is in progress. Prices are unchanged, quotations in this market remaining 1 87½@1 90c for goods on the spot and 1 85@1 87½c to arrive. In Boston low quotations are still made but we have heard of no important business there of late.

### Acids.

Acetic acid rules quiet, with little doing, while quotations continue to rule at 2¼@2½c according to quantity and the brand called for.

Muriatic and nitric acids are in limited demand, with the market featureless at former quotations.

Oxalic acid—Sales of this article have continued in a small way with nothing of any moment noticeable. Quotations are unchanged as follows: 6c for 10-ton lots, while 6¼c is asked on orders for small quantities. These prices are for prime German and English ex store, New York, Boston and Philadelphia.

Tartaric acid is quoted at old prices, with the demand light, and attracting no attention. For crystals, the following prices rule, in quantities of 3,000 pounds or more, 43c; in barrels, less quantity, 44c; in 50-lb boxes, 45c. For powdered a cent advance is asked over these figures.

Sulphuric acid is in moderate demand with the market without feature, and prices at old figures.

### Miscellaneous.

Acetate of lime has not sold to any extent, and the situation is unchanged from last week. The market is rather weak at 1 15@1 20c for brown and 2 25@2 30c for gray.

Blue Vitriol.—Several inquiries are noticed for this article, but stocks are only in limited supply and the market is firm at 5¼@6c as to quality and quantity, with no business of any moment reported, owing to the scarcity of available stock.

Nitrate of soda.—The market is much better in tone, than at the time of our last report, and 2 12½@2 20c is now quoted for spot supplies according to quantity, while to arrive 2 05@2 20c are the asking figures. Sales of some 3,000 bags are reported at prices within these quotations.

Brimstone—The predictions contained in our previous issue have been fulfilled to a certain extent, and freights have already advanced 2s over the quotations at the time of our report of last week. As a consequence the market for shipments is firmer, and values have advanced to $20 for best unmixed seconds and $19 50 for thirds. But little has been accomplished in spot stocks, and a moderate jobbing demand has been supplied at $20 50 for seconds and $20 for thirds.

Cream Tartar—The demand has continued small, and the only change from last week has been in the amount of discount allowable for "prompt cash," the same having been altered from ½c to 1c. The quotations are as follows: 32@32½c for crystals and 32½33½c for powdered, as to style of package and quantity. Terms, net cash, 30 days free on board, New York, or, less 1 per cent, for prompt cash.

### Ammonias, Potashes and Fertilizing Chemicals.

A fair business is reported in this market, and owing to the advance in wheat, etc., there are prospects of a good season in fertilizing chemicals. It is generally conceded that the indiscriminate cutting of prices must stop, and that values will be put on a better basis. Following are the quotations: Azotine, at $2 30@2 35, as to quality; dried blood $2 30@2 35 for low grade Eastern in buyers' bags and $2 35@2 37½ for high grade Western finely ground; tankage, $23@24 for high grade, and $21@22 for medium and low grades, as to quality; sulphate ammonia, $3 15@3 20; bone-black guaranteed 70% phosphate, $17 50@19 per ton; dissolved bone, 90c per unit; acid phosphate, 75c per unit; rough bones, $21 per ton for hard and clean foreign, and $16 50 for the usual run of domestic; ground bone, $24@25 as to grade; fish scrap, $24@25 f o b factory. Undried Charleston rock is held at $5 per ton, and kiln dried at $6, both f o b vessel, at the mines. Ground Charleston rock is quotable at $9 50@9 75 ex steamer at New York.

Muriate of Potash—Is unchanged from last week. The feeling has been one of quietness, and no new sales are reported. The quotations continue at $1 80 for spot supplies and to arrive.

Double Manure Salts—Are in moderate demand, without feature, with quotations ruling at $1 05@1 07½ basis of 48% potash. High grade sulphate of potash is quoted at $2 15@2 20 per 100 lbs, basis of 90% potash.

Kainit—The demand continues active, but cannot be fully supplied, owing to lack of arrivals caused by the scarcity of freight room. There is reported to be nothing on spot. The nominal quotations on spot are in the neighborhood of $10 30, while $9 50@9 75 are quoted for futures.

### Philadelphia Chemical Market.

PHILADELPHIA, Sept. 3, 1888.

During the past week a fair business has been done in English chemicals; large sales are not frequent but an improved jobbing demand is noted. The arrivals have been in most instances about equal to the demand and figures in consequence are firm at previous quotations.

Carbonates, soda ash, Liverpool, 48% is quoted on spot at 1 27½@1 35c, with a better demand in progress than has been noted for some time past. To arrive and for shipments 1 25@1 32½c will buy as to brand, quantity and date of arrival. In 58% no new features have presented themselves during the past few days. Newcastle 48% continues in limited supply, and nothing obtainable excepting from second hands, who are asking the usual jobbing ad-


# N. MATHIESON & CO.,

## 58%

# PURE ALKALI

**Manufactured by the Ammonia Process.**

TRADE MARK.

**Widnes, Lancashire, England.**

The superiority of this Alkali is evident from the following analysis made by the well known English chemists Huson Bros:

| | |
|---|---|
| *Carbonate of Soda, | 99.41 per cent. |
| Sulphate of Soda, | traces |
| Chloride of Sodium, | 0.15 " |
| Carbonate of Lime, | 0.17 " |
| Magnesia, | traces |
| Peroxide of Iron, | 0.06 " |
| Alumina, | 0.03 " |
| Silica, | 0.08 " |
| Moisture, | 0.10 " |
| | 100.00 |

*Carbonate of Soda 99.41 per cent. — 59 per cent. Alkali Commercial Test

**WARREN & CO.,**

*18 Post Office Square,*

**BOSTON.**

Sole Agents for the United States.

**FAIRFIELD CHEMICAL CO.,**

71 WALL ST., NEW YORK.

# ACIDS

Mixed Acids for Nitro-Glycerine a Specialty.

WORKS AT BRIDGEPORT & NEW HAVEN, CONN.

# NATRONA BI-CARBONATE OF SODA

NATRONA

TRADE MARK

SODA

**(ABSOLUTELY PURE.)**

The nature of the raw material from which NATRONA BI-CARBONATE OF SODA is made—viz., Kryolith, a mineral containing pure sodium—insures a purity and uniformity of product which cannot be obtained from any other known material. In making Bi-Carb. Soda from any other raw material, the use of sulphuric acid is a necessity, but none is used in any part of the process of making NATRONA BI-CARB; hence its entire freedom from the slightest trace of arsenic, which is always present in ordinary soda. Its absolute purity and entire freedom from all traces of sulphate of soda, common salt, and other impurities, render NATRONA BI-CARB NEARLY TASTELESS, and, being bolted through the finest bolting-cloth, insures the finest state of division.

To these indisputable facts the attention of CONSUMERS of soda is specially called. They are IMPORTANT, and should influence both those who use and those who sell soda, to buy and sell NONE BUT THE BEST.

The NATRONA Bi-Carb Soda is kept in stock by almost every wholesale druggist and grocer throughout the United States, of whom it may be ordered.

**Natrona Bi-Carb. Soda is unequalled by any other brand of English or American Manufacture.**

**Penna. Salt Manufacturing Co.,**

**Natrona Chemical Works, PHILADELPHIA, PA.**

**WILLIAM RUPP, F. C. S.**

**Analytical and Consulting Chemist,**

Experimental Investigations in all Branches of Technical Chemistry. Analyses of Ores, Metal, Fertilizers, Waters, Coal and Commercial and Technical Products.

**Laboratory, 97 WATER STREET, - - - NEW YORK.**

CORRESPONDENCE SOLICITED.

**Atlantic Sulphur Works,**

MANUFACTURERS OF

**VIRGIN ROCK AND ROLL BRIMSTONE.**

And Flour of Sulphur.

**119 MAIDEN LANE, NEW YORK**

**TORONTO, BROKERS— CANADA,**

**STANWAY & BAYLEY**

ESTABLISHED 1869

CORRESPONDENCE INVITED

**CAN SELL TO ADVANTAGE HEAVY CHEMICALS,**

Linseed Oil, Turpentine, Glue, Etc., Etc.

# GASKELL, DEACON & CO.

**Alkali Manufacturers, WIDNES.**
In addition to their well known Chemicals, offer their more recent specialty and already highly popular form of Soda

# CRYSTAL CARBONATE

The Purest, Cheapest and most Soluble form of Crystallized Soda.

1 lb. Equal to 2 1-2 lbs. of Soda Crystals.

**J. L. & D. S. RIKER, Agts.**

45 CEDAR ST NEW YORK

---

## SCHERING & GLATZ,
**55 Maiden Lane, N. Y.,**
Importers of CHEMICALS, and Sole Agents for SCHERING'S and SAAMES'
## CHLORAL HYDRATE,
Salicylic Acid, Carbolic Acid, Pyrogallic Acid, Glycerine, Russian Isinglass, Paraldehyd, Etc., Etc.

---

## ALONZO L. THOMSEN,
**Manufacturing Chemist,**
Works, Leadenhall & Winder Sts., BALTIMORE, MD
—EPSOM SALT, SAL SODA,—
IODIDE POTASSIUM. IODINE RESUBL., SULPHATE ZINC, CHEM. PURE ACIDS,
And a full line of other Chemicals.

---

## FERGUSSON BROTHERS
BROKERS AND COMMISSION MERCHANTS
102 CHESTNUT STREET, PHILADELPHIA
**Glass, Soap & Paper Makers' Chemicals, Essential Oils**
AGENTS FOR
GREENBANK CO., St. Helens. RUNCORN CO., Liverpool.
C. ALLHUSEN & SON, Newcastle. G. ABATE & SON, Messina

| | | |
|---|---|---|
| BLEACHING POWDER. | CAUSTIC POTASH. | BORAX. |
| SODA ASH. | CHLORATE OF POTASH | CASTOR OIL. |
| CAUSTIC SODA. | CARBONATE OF POTASH | CAMPHOR. |
| SAL SODA. | OXALIC ACID. | OIL LEMON. |
| NITRATE OF SODA. | BRIMSTONE. | OIL BERGAMOT. |

Finest Quality Philadelphia Quercitron Bark for Export.

---

## LINDER & MEYER,
21 PEARL STREET, BOSTON.
LIVER 72 Per Cent. & 74 Per Cent. CAUSTIC SODA,
HIGH TEST BLEACHING POWDER.
NEW ENGLAND AGENTS
BRUNNER, MOND & CO.'S 48 Per Cent. and 58 Per Cent. PURE ALKALI.
SOLVAY PROCESS CO., 48 Per Cent. and 58 Per Cent. PURE ALKALI.

---

## E. de HAEN,
Chemical Works, List, near Hanover, Germany,
**Manufacturer of Chemicals,**
For Pharmaceutical and Technical Purposes.
ROGERS & PYATT, Agents, 80 Maiden Lane, N. Y.
Ammonia Muriate Barium Per Oxy, Barium Nitrate Benzoic Acid, Carbolic Acid Strontia Nitrate.

---

## G. A. & E. MEYER,
COMMISSION MERCHANTS,
30 CLIFF STREET, NEW YORK.
Soda Ash, Sal Soda, Venetian Red,
Chance's Bicarb Soda, Indigo,
Pattinson's Carbonate and Calcined Magnesia.
Carbonate in 2 oz., 4 oz. small square & powdered. Calcined ½ & 1 lb. bottles and 1 lb tins
AGENTS FOR
**WASHINGTON CHEMICAL CO.**
**Also, LEECH, NEAL & CO.'S**
Turkey and Indian Reds, Purple Browns, Colcothar, Metallic Oxides
Bright Red and Scarlet Oxides.

---

DOUBLE REFINED GRANULATED SALTPETRE NIAGARA LABORATORY JERSEY CITY B.&R. OFFICE 163 FRONT ST. NEW YORK

## BATTELLE & RENWICK,
**163 Front Street, NEW YORK.**
THE NIAGARA LABORATORY,
MANUFACTURERS OF
**Refined Saltpetre,**
Crystals, Granulated and Powdered.

---

## LARKIN & SCHEFFER.
**Manufacturing Chemists,**
ST. LOUIS,
OFFER THE TRADE
# CHEMICALS,
TECHNICAL, PHARMACEUTICAL AND SCIENTIFIC
*OUR GOODS ARE MADE IN STRICT CONFORMITY TO THE U. S. PHARMACOPŒIA.*
CORRESPONDENCE SOLICITED.

---

# Newcastle Chemical Works Co.

LIMITED.
Successors to C. ALLHUSEN & SONS.
## Newcastle on Tyne, England,
MANUFACTURERS OF
# Carbonated Soda Ash, 48, For Glass Makers
## BLEACHING POWDER and SAL SODA.
**Chemically Pure Caustic Soda 77 per cent.**
Our 48 per cent. Ash is manufactured under the NEW PROCESS, expressly for Glass-making. Newcastle test being more liberal than Liverpool, buyers of this brand gain from 1 to 2 per cent. in strength.
AGENTS FOR THE UNITED STATES
## WING & EVANS
54 WILLIAM STREET. NEW YORK.

vance. On steamer now on way nearly everything is sold, for shipment 1 25@1 30c will buy.

Caustic soda ash, 48%, continues wanted, as a rule, in a jobbing way, although one or two sales of round lots are reported on private terms. Spot goods are bringing 1 30@1 35c; to arrive 1 25@1 32½c is named. Caustic soda is dull; 60% on spot is worth 2 40@2 47½, in a large way to arrive, or for shipments 2 35@2 40 will buy; 70% from store or dock in a small way is held at 2 30@2 37½c, round lots at proportionately less. Shipments are quoted at 2 22½@2 27½c.

Refined alkali 36° on spot is quiet and in light stocks; small quantity can be had at 1.27½@1.35. B M & Co 48° is in free supply, and can be had ex store at 1.27½@1.35. Shipments are quoted at 1.25@1.30, as to quantity. B M & Co 58% is meeting with a fair demand, and as a result there is nothing to be had on spot from first hands. Holders are naming 1.27½@1.32½, to arrive; the lots now on way have all been closed out: shipments are held at 1.22½@1.27½, but on firm offer 1.20 might buy a round lot.

Sal soda is in moderate supply and holders are firm at 1@1 15c; to arrive a fair business is reported and 92½@97½c are the general asking figures. Shipments are quoted at 90@95c and sales reported within the range. The supply of bleaching powders has been decidedly reduced during the past few days and holders are now asking 1 97½@2 10c as to brand. Shipments are quoted at 1 92½@1 97½c and 1 90c might buy on offer. Nitrate of soda in store is held at 2 10@2 25c; shipments are quoted at 2 02½@2 15c.

### The Ammonia Soda Process.

The recent flattering statement of the directors of Brunner, Mond & Co., alkali manufacturers by the ammonia process, is taken as a text by the *Chemical Trade Journal* of London for some pertinent remarks, to show the progress of the industry. It says:

"All this should serve as food for reflection to most of the Leblanc alkali makers, and the development of the ammonia soda process should teach us a few lessons, which no doubt are well learned in adversity, but when all danger has passed away it is only human nature to be as careless as before. The first lesson, a perusal of the literature of the ammonia soda process should teach us is, that the period allowed by the patent laws in which to perfect an invention, and covered by the time allowed for provisional protection, is ridiculously short. It took nearly half a century to perfect the old Leblanc process, nearly thirty-six years to work out the manganese recovery process, while it is just half a century ago since Dyar and Hemming first decomposed chloride of sodium with carbonate of ammonia. For many years we have been of the opinion that the stage of provisional protection in our British patent law should be abolished without any reservation whatever. If any man has made a discovery he should know what that discovery is and how he would carry it into operation, and he should not be granted even provisional protection, unless he is able to state this very clearly. To grant even protection for an ill considered idea, is to seriously handicap many manufacturers who have plant laid down for certain objects.

"We do not say that every manufacturer should have conceded to him the privilege of utilizing every new reaction in chemistry that is discovered, but he should be able to utilize, without let or hindrance every known chemical reaction acting upon every known commercial compound or waste substance. The application of this rule would lead invention into a very different direction to that it takes now. Instead of hunting up and patenting all sorts of complex chemical reactions, more attention would have to be paid to the practical details, or, in a few words, it would aid the development of chemical engineering. And if we look back on the various undeveloped inventions of the past half century we shall find as a rule that they have not remained in a state of stagnation because the chemistry has been at fault. In the majority of instances the chemistry is faultless, and yet the processes are not in actual practice because no one has devised plant for the manipulation, nor given sufficient instructions as to how the processes shall be worked. Let us fall back again to the ammonia-soda process. It was in June, 1838, when Dyar and Hemming obtained protection for a process in which common salt was to be decomposed with carbonate of ammonia. On August 27th, 1840, Henry Waterton also obtained protection for what he considered an improvement on this process. He took rectified gas liquor, containing a certain percentage of carbonate of ammonia, and added powdered salt, with stirring, and infused into the mixture as much carbonic acid as it would absorb. The result was chiefly bicarbonate of soda. In August, 1855, we find Gossage at the process, and the fourth claim of his patent 1,963 of that year is for the useful application of bicarbonate of ammonia for the decomposition of common salt and production of bicarbonate of soda—either employing the condensed product from distilling solutions, or passing their vapors at once into a closed vessel containing common salt and water.

"From 1840, at stated periods forward, we have evidence that the ammonia process was worked by Kunheim, at Berlin, by Seybel, near Vienna, by Deacon and Gossage near Widnes, by Bowker at Leeds, By Muspratt at Newton, by Vilvorde at Brussels, by Turck at Sommevelliers, by Schlocssing at Puteux, and, no doubt, by others, without being pecuniarily successful, even when gas-water could be had as a gift from the gas works and salt certainly not at a prohibitive price, while to-day we have the firm of Brunner, Mond & Co., with dearer labor, continuously making such handsome profits, on soda alone, that they have been able already to more than return the greater portion of the invested capital as dividends, to pay off an exceedingly large patents account, and to pile up a reserve fund of over £126,000.

"And what will it do next? is the question of many an alkali maker, who has deluded himself with the idea that Leblanc caustic is still unassailable. A very slight calculation from this last balance sheet will show the strength of the position of ammonia soda as a raw material for the manufacture of caustic soda, and the manufacturers of this article must expect competition in this direction so soon as the increasing make of ammonia soda becomes difficult of sale."


**KNOWLES BROTHERS,**
Importers and Refiners of
SALTPETER
62 William Stseet, NEW YORK.

**THE CHEMICAL IMPORTING & MANF'G CO.,**
DEALERS IN A GENERAL LINE OF CHEMICALS.
23 Cedar St., **Borax and Boracic Acid** New York.
SPECIALTIES.
Concentrad Borax, Powdered " California Refined Borax, City " " Refined Boracic Acid Crystals, " " " Flaky, " " " Powdered.

**Brooklyn Sulphur Works,**
FLOUR SULPHUR — DOUBLE REFINED AND SUBLIMED — BROOKLYN SULPHUR WORKS — OFFICE — 163 FRONT ST. — NEW YORK.
MANUFACTURERS OF
Virgin Rock and Roll
BRIMSTONE
AND FLOUR SULPHUR,
Battelle & Renwick,
163 FRONT STREET, NEW YORK.

Telephone Call—359 John.
**Dundee Chemical Works,**
MANUFACTURERS OF
Oil of Vitriol, Muriatic Acid,
Nitric Acid, Aqua Fortis,
Nitrate of Iron, Muriate of Tin,
Tin Crystals, Stannate of Soda,
Silicate of Soda, etc.
Mixed Acid for Nitro Glycerine a Specialty.
17 Cedar Street, New York.
Factory; Passaic, N. J.

HAMILTON H. SALMON. HAMILTON H. SALMON, JR. R. BRANDT.
**HAMILTON H. SALMON & CO.,**
Sole Agents of the United States & Canada, of the Sales Syndicate of the
**MURIATE OF POTASH**
Manufacturers of STASSFURT, GERMANY.
136 Pearl Street, NEW YORK.
We commend this article to manufacturers and dealers as being the best and most available source of Potash existing, as we guarantee it to contain not over ½ per cent. Chloride of Magnesium—and analyzing from 80 to 98 per cent. of Muriate. All genuine Syndicate goods are put up in uniform bags of 224 lbs. each net weight, and to each bag is attached a leaden Seal marked "U. S. Sole Agency, H. H. S." on one side, and "Verkaufs Syndicat Stassfurt" on the reverse. Orders are solicited for direct shipment, to any sea port, or for present or future deliveries in New York.

**JOSEPH BINNS,**
Successor to GEO. BINNS Sr.,
Manufacturing Chemist,
Aqua Ammonia, Spirits of Nitre, Epsom Glauber Salts, Muriatic Nitric and Acetic Acids, Aquafortis &c
Office 183 PEARL STREET, Cor. Cedar St., NEW YORK. Works, Williamsburgh.

Established 1871
**JOHN C. WIARDA.**
Greene & Provost Sts., BROOKLYN, E. D., N. Y.
MANUFACTURER OF
FLUORIC AND WHITE ACIDS,
Metal Oxides, Leaden Ware and Glass Mfrs. Materials

| | | | |
|---|---|---|---|
| Antimony Oxide, White, | Cobalt Oxide, | Iron Oxide, | Silver Oxide. |
| " Needle, | Copper " Black | Manganese, | Soda Ash, |
| " Diaphoretic, | " " Red, | Nickel Oxide, | SodaBicarbonate |
| Ammonia Carbonate, | " Scale, | " Nitrate, | Tin Oxide |
| Bone Ash, pure white, | Feld Spar, | Potash Carb, | Tin Suboxide |
| Chrome Oxide, | Fluor Spar, | Saltpetre, | Uranium Oxide |

RICHARD C. REMMEY Agt.
Philadelphia Chemical Stoneware Manufactory
1100 East Cumberland St., Phila., Pa

Manufacturer of all kinds of Chemical Stoneware for Manufacturing Chemists Also Chemical Bricks for Glover Tower.

**B. P. CLAPP & CO.,**
Manufacturers of
AQUA AMMONIA
of all Strengths for Chemical and Refrigerating purposes.
PAWTUCKET, R. I.

**PHILADELPHIA COPPERAS WORKS,**
10th and Dickinson Streets, Philadelphia, Pa.
Lessees of Mr. Wetherill Peterson's "CRESCENT CHEMICAL WORKS," are now prepared to furnish Copperas in any quantity to the trade. Address PHILADELPHIA COPPERAS WORKS, Lock Box 1136, Philada. P. O.

**MASON, CHAPIN & CO.,**
Importers & Jobbers.
Sole Receivers for United States and Canada, of Following Brands
BLEACHING POWDERS
N. Mathieson & Co.,—Wigg Brothers & Steele, "Anchor Brand."—John Hutchinson & Co.
141 Milk Street, BOSTON. PROVIDENCE, R. I. 58 Pine St., NEW YORK.

**HELLER, HIRSH & CO**
Commission Merchants and Brokers
Office 164 Front St., New York.
Acid Phosphate, Kainit, Muriate of Potash, Crude and Ground Mineral Phosphates.
SPECIALTIES:
Blood and Egg Albumen, Starch, Boneblack, Cottonseed Meal, Dried Blood and other Fertilizing Materials,

"THE SKULL" BRAND
CAUSTIC SODA.
Mort, Liddell & Co. Widnes, England.
Agents at Chicago, Geo. R. Jenkins & Co., successors to Kenly & Jenkins. 14 Franklin St.

## German Chemical Industry.

REPORTS OF THE GERMAN CHAMBERS OF COMMERCE.

The production of the German chemical industry, which represents an annual payment of 62 million marks (£3,100,000) in wages, has again risen during the past year, while its manufactures have been consumed by the various trades without any difficulty whatever. A gradual improvement in the state of affairs was noticed as compared with former years, inasmuch as the prices of many raw materials, as well as those of many manufactured articles, experienced a sensible rise, which, however, according to the report of the Chamber of Commerce for Upper Bavaria, in the majority of cases depended less upon natural than upon artificial circumstances, viz., upon the formation of conventions. It is quite true that increased competition often necessitated manufacturers working at very modest profits, indeed some few articles show a reduction in prices. The reports of the Chambers of Commerce are unanimous in complaining bitterly that the exports to certain countries, which at one time were so important, more especially to Russia and Austria, have been so extraordinarily hampered by the present conditions of the duties. Thus, according to the report of the Konigsberg Chamber of Commerce, the trade in technical drugs and chemicals, which at one time was so brisk, has now lost almost all its importance since the Russian duties, so repeatedly raised, were in July, 1886, increased to almost prohibitive rates for most chemicals. The "Silesia," a union of chemical manufacturers, according to the report of the Breslau Chamber of Commerce, complains that its former somewhat extensive export trade to Russia and Austria, owing to the restrictive duties imposed, has experienced a very important falling off, owing to the action of the duty laws, so that any remunerative business transactions being completed with these countries is almost entirely out of the question. Austria not only blocks the way with her heavy duties, but is entering into sharp competition with our home industry with the most varied articles, as, for instance, with mineral acids, glauber salts, etc., inasmuch as many of the mauufactures, which when imported into Austria are subjected to a heavy duty, and are permitted to enter into Germany duty free. A removal of the disparities now existing with regard to the treatment of duties in the goods traffic to and from Austria appears to be urgently necessary. Necessitated by the conditions of duty that are being imposed, many firms are finding themselves compelled to curtail their manufacturing activity. As an instance we may cite that, according to the report of the Gorlitz Chamber of Commerce, the well-known manufactory of Theodore Schuchardt which formerly worked two-thirds for technical and one-third for scientific and medicinal purposes, has, in consequence of the law of 1879, so altered its production that for about the last four years it has worked three-fourths for scientific and medicinal and one-fourth for industrial purposes. The manufacture of tannin, tin preparations, dyeing and bleaching requisites, as well as some other technical chemicals, the firm has entirely given up. The reason of this is the entire cessation of the exports to Russia, and partial cessation of the exports to Austria—a consequence of the new policy of protective duties.

In spite of all scarcity, Leblanc soda hos declined still more, which, according to the commercial report of the "Rhenania," Chemical Works (report of the Chamber of Commerce for Aix la Chapelle and Burtscheid), is to be ascribed to the circumstance that the ammonia-soda works of the German soda manufactories are continually increasing their production, while they are also offering serious competition to the older works as regards caustic soda and soda crystals. According to the report of the Buckau Chemical Works (report of the Magdeburg Chamber of Commerce) the manufacture of Leblanc soda is in a state of hopeless decline, and will very soon have to be entirely suspended by this firm. Against this, however, the demand from the ammonia-soda produced at their Stassfurt works, as well as for the caustic soda and soda crystals obtained from the same, has become so brisk that the erection of a second system could be effected without leading to any accumulation of stocks of soda. The "Silesia" union of chemical manufacturers report that ammonia-soda owing to the convention of the manufacturers in spite of a very important production, has experienced a considerable improvement in price. As regards caustic soda, however, the convention launched out to the disadvantage of the united manufacturers. The few producers not belonging to the union obtained a rapid sale, at prices which were but very little below those of the convention, while the members of this latter association were checked both with regard to sales and production. In consequence of this, the convention has not been renewed for 1888. The chief supplies for covering sales of caustic soda fell, as usual, to the lot of the English makes, which have not been able to be suppressed in spite of the import duty of four marks per 100 kilos. The home requirements of potash have been almost entirely supplied by German makes at somewhat higher prices than those of last year. If, owing to the union of the manufacturers, the production has been drawn within certain limits, nevertheless in view of the report of the Buckau Chemical Works the sales of caustic and calcined potash could not have been made without the sacrifices which have undoubtedly been connected with free and open competition in this article.

According to reports from the Freiberg Chief Mining Bureau, the sales of all kinds of sulphuric acids have been effected at lower prices during the year; while in 1886 the average price was 1·915 marks (1s. 10¾d.) per cwt., in 1887 it only reached 1·415 marks (1s. 5d.) per cwt. Again, the report of the Hagen Chamber of Commerce indicates the position of sulphuric acid during the entire year 1887 as having been extraordinarily unfavorable, indeed the manufacture of sulphuric acid has again increased, judging from the report of the "Oldest Merchant in Berlin," especially through the continued condensation of the sulphurous acid escaping from the "wasting" of the zinc blende at the Rhenish-Westphalian furnaces. However, according to the report of the Buckau Chemical Works, during the last few months the depression has not been so great, inasmuch as at the fiscal smelting works a decrease in production has been resorted to. From the Cologne report we gather that since the reformation of the defunct association of Rhenish manufacturers prices have risen considerably, in some instances from 30 to 40 per cent. Muriatic acid and chloride of lime, which in consequence of the retrogression of the manufacture of Leblanc soda has been offered in less quantities, met with a good demand and, according to reports from Berlin, Magdeburg, etc., at remunerative prices, especially as the importation of English chloride of lime became smaller. According to the Magdeburg report the manufacture of nitric acid has been less satisfactory. The business in nitrate of potash has, from the accounts of a manufactory situated in the Harburg district, kept very quiet, and no important alterations in prices have taken place as compared with those ruling during the previous year. The export trade to Russia and Austria has been completely stopped, owing to the heavy import duties imposed by these countries; indeed, owing to the Austrian saltpeter works being able to import their material duty free they have hampered the German trade very considerably. Rhenish manufacturers, in view of the report of the Cologne Chamber of Commerce, have had to encounter very great competition, more especially in the export trade. According to the report of "The oldest of the merchants of Berlin," chloride of potassium has met with a very active demand. The production in 1887 amounted to about 2½ million cwts. (125,000 tons), or about 350,000 cwts. (17,500 tons) more than in 1886. The total exports have risen from 579,982 (57,998 tons) to 774,570 double cwt. (77,457 tons), England and the United States of America being the principal consumers. "The oldest of the merchants of Berlin" states that the exportations of water glass have been limited to a rather small amount, while the home consumption for soap manufacture has retrograded, owing to which during the past year the manufacture has been curtailed. The treaties of commerce, as we are informed by the report of the Mannheim Chamber of Commerce, are unfavorable to this industry. Austria as a market is already closed, while Italy, in consequence of the new customs tariff coming into force after 1888, will also cease to be a buyer. The prices of water


**G. H. NICHOLS & CO.,**
MANUFACTURING CHEMISTS
41 CEDAR ST., NEW YORK.
**Oil Vitriol, Muriatic Acid,**
**Sulphuric Acid, 98 per cent.**
**Alum, Sulphate of Soda.**

Our Refined Oil Vitriol is the purest Commercial Acid made in the World

LAUREL HILL CHEMICAL WORKS. Laurel Hill, L. I.
CAPELTON CHEMICAL WORKS Capelton, P. Q., Canada.

**PHENIX CHEMICAL WORKS,**
**Oil Vitriol, Muriatic Acid,**
**ACETIC ACID,**
**Copperas, Sulphate Soda,**
NITRIC ACID, AQUA FORTIS, MURIATE TIN, &c.
GRIDLEY & CO., Agents,
87 MAIDEN LANE, NEW YORK.

**JOS. C. GAMBLE & SON,**
*ST. HELENS, Lancashire.*
MANUFACTURERS OF
**CHLORATE OF POTASH**
**CHLORATE OF BARYTA**
**CHLORATE OF SODA**
**SULPHIDE OF SODIUM**
SODA ASH, CREAM CAUSTIC SODA
BLEACHING POWDER.
**CROWN FILLER.**

**ROBERT S. CARR,**
Hamburg, Germany,
SOLE AGENT OF THE
**KAINIT SYNDICATE**
FOR THE UNITED STATES AND CANADA.
**Admiralitatstrasse 52, Hamburg**

**Parties wishing to purchase KAINIT are Cauti to apply only to my Agents at the following ports, or, to the Houses designated by them:**

Charleston, S. C.—Street Brothers.
Baltimore, Md.—Dresel, Rauschenberg & Co., Agents.
Alex. Kerr, Bro. & Co.
Jas. Bonday, Jr., & Co.
Norfolk, Va.—Wm. Lamb & Co., Agents
Royster & Studwick.
Wilmington, N. C.—Heide & Co.
Port Royal, S. C. / Savannah, Ga. / Brunswick, Ga. / Jacksonville, Fla. } A. Minis & Sons, Savannah, Ga.
Pensacola, Fla. / Mobile, Ala. } Hammond, Hull & Co., Savannah, Ga.
Philadelphia, Pa.—C. H. Tiers, 10 S Delaware Ave.
New York City—Paul Weidinger, 76 Pine St.
New Orleans, La.—Steinhardt & Co.

**BILLINGS, CLAPP & CO.**
Manufacturing Chemists,
**BOSTON,**
MANUFACTURERS OF
**FINE CHEMICALS.**
In addition to our Chemical list we make a full line of
**Pharmaceutical Preparations,**
**Fluid Extracts,**
**Elixirs, Syrups,**
**Medicinal Wines, &c**
NEW YORK OFFICE, 35 PLATT STREET.

glass have also fallen. The new industry of fluid carbonic acid produced by the compression of naturally occurring gas, is, according to the report of the Cobientz Chamber of Commerce, continuing to increase in importance.

The charcoal industry is reported by the Chemnitz Chamber of Commerce to be still anything but favorable. The restrictive duties in those countries to which it is exported have stopped the former active business, while the home consumption by no means keeps pace with the production. As an instance, we may mention that the former active trade in acetic acid with Belgium has all at once become impracticable, owing to the sudden raising of the duty. The demand for denaturing wood spirit was so brisk at the time of the new law regarding the spirit duties that, for the moment, the necessary supplies could not be obtained. As, however, the denatured spirit soon came into discredit with the consumers, the active demand for wood spirit only lasted for a very short time, and at the close of the year it came within an extremely narrow compass.

The course of business in manures (superphosphates and bone meal) was scarcely satisfactory, as, in spite of the continually rising prices of these products, the sales rather diminished than increased, which fact can be accounted for by the permanently increasing consumption of the Thomas slag.

The importation of superphosphate into Germany amounted in 1886 to 33,337 tons, in 1887 to 40,540 tons; the exports in 1886 to 26,484 tons, in 1887 to 44,087 tons. The position of the glue boiling industry was a very depressed one, having been seriously affected by the action of glue surrogates and of increased competition. Exportation to Austria and Russia was entirely stopped, owing to the raising of the import duties in those countries. Austria, on account of being able to procure the raw material on cheaper terms than Germany, can produce more cheaply, and is now supplying Germany with large quantities of glue, owing to which a depression in price has resulted.

The tar industry, according to the unanimous reports emanating from Berlin, Mannheim, Dresden, etc., during a long series of years, remained to some extent in a normal condition. The uninterrupted decline in prices of almost every tar product was finally followed by a pause in the declension, and even by a slight improvement in prices. Among the raw products of the tar color industry, benzole, anthracene and naphthaline, the two former experienced no inconsiderable rise in prices, while the latter declined in value. The demand for crystallized carbolic acid continuously exceeded the production of this article, in view of which a continuous rise in price must be noted. The prices of the main products, roofing tar and pitch, remained to some extent unaltered. The new laws regarding the spirit duties came to the assistance of this industry, inasmuch as the pyridine bases came within the range of the articles permitted to be used. In view of the necessity of obtaining the means of denaturing with the utmost rapidity, a new business sprang up in Mannheim, which, being carried on with the utmost celerity, supplied the whole of Germany for some time with the necessary ingredients.

## Drying Oils.

K. HAZURA

Notwithstanding the great technical importance of the drying oils, they have been very much neglected by chemical research in recent years.

About twenty-five years ago, Mulder was engaged with an examination of the drying oils and he gave the results of his investigations in his book "Chemie der austrockmenden Oele." He especially examined linseed oil, and to a less extent hemp oil, poppy oil and nut oil.

Since then the study of drying oils has been but little advanced, until about five years ago, when Prof. Bauer and myself took up the subject. Later on, I have independently continued these researches as far as they relate to the composition of the drying oils. The results of these investigations, in which Messrs. A. Friedreich and A. Gruessner also took part, were placed before the Imperial Academy of Sciences of Vienna in six parts. These gave the composition of the liquid fatty acids of linseed oil, hempseed oil, nut oil, poppy oil and cottonseed oil, and I will here briefly review the results:

According to Mulder the drying oils are mixtures of the glycerides of liquid and solid, saturated and unsaturated fatty acids. Of the solid fatty acids he found only palmitic, myristic and lauric acids. As the chief constituent of the unsaturated fatty acids of the drying oils, he assumed an acid $C_{16}H_{28}O_2$, which he called linoleic acid, and to which he ascribed the same composition as Schueler. As he obtained too low results for the metallic oxides in the linoleates, he suspected the presence of another unsaturated acid, $C_{18}H_{32}O_2$, richer in carbon. Whether this acid was ordinary oleic acid, or an isomer of the same, Mulder could not determine, for he complains in his book that he had no means of effecting a separation of these acids.

It is in fact exceedingly difficult, if not entirely impossible, to separate the individual unsaturated fatty acids, of which the liquid fatty acids of the drying oils consist, while it requires no special pains to separate the solid fatty acids from each other by fractional crystallization or precipitation.

I have now succeeded in finding a method which may be applied for determining the composition of the unsaturated fatty acids of the fats and oils, which rendered excellent service in my investigation of the drying oils. In the following I will describe it:

Method for Examining the Unsaturated Acids of Fats and Oils.—By acting upon a solution of hemp oil in glacial acetic acid with bromine, I obtained in addition to liquid bromine products a solid product, from which I could isolate two well characterized compounds. The one melts at 114—115° C., and is very readily soluble in alcohol, ether and glacial acetic acid. It crystallizes from dilute alcohol in nacreous scales. Its composition corresponds to the formula $C_{18}H_{32}O_2Br_4$. The second compound is very difficultly soluble in alcohol, ether and glacial acetic acid, and crystallizes from alcoholic solutions in microscopic needles. Their melting point is at 177° C., and their composition corresponds to the formula $C_{18}H_{30}O_2Br_6$. When these bromine products are heated in their alcoholic solution with zinc and hydrochloric acid, the bromine is eliminated by the nascent hydrogen, but not replaced by the same, the unsaturated fatty acids, $C_{18}H_{32}O_2$ and $C_{18}H_{30}O_2$, being reproduced. The former absorbs from Huebl's reagent 4 atoms and the latter 6 atoms iodine. The former, which therefore contains 4 free bonds I have named linolic acid, the latter in which 6 free bonds are to be assumed linolenic acid. If these two unsaturated fatty acids are oxidized with potassium permanganate in alkaline solution, we have in addition to lower fatty acids from linolic acid, sativic acid; from linolenic acid, linusic acid.

Sativic acid is almost insoluble in water, in part dissolving in about 1000; it is readily soluble in alcohol and insoluble in ether. It melts at 173° C., and crystallizes from water in silky needles. Its composition corresponds to the formula $C_{18}H_{36}O_6$, and its further examination showed that it contains a carboxyl group, and 4 alcoholic hydroxyl groups, and is therefore a pentatomic monobasic acid. Its alkali salts are soluble in water, the barium salt, however, is insoluble in water. By treatment with nascent hydriodic acid it is reduced to ordinary stearic acid.

Sativic acid is, therefore, a tetraoxystearic acid.

Linusic acid is almost insoluble in cold water, difficultly soluble in hot water and alcohol. It is completely soluble in ether. It crystallizes from water in small microscopic rhombic plates, which melt at 203° C. Its composition corresponds to the formula $C_{18}H_{36}O_6$, and its further examination showed that it contains one carboxyl group and six alcoholic hydroxyl groups, showing it to be a heptatomic acid. Its alkali salts are very readily soluble in water, the barium salt is difficultly soluble in cold, but readily soluble in hot water.

Bearing in mind that I obtained by oxidizing in alkaline solution from:

Linolenic acid $C_{18}H_{30}O_2$.....Linusic acid $C_{18}H_{30}O_2(OH)_6$.

Linoleic acid $C_{18}H_{32}O_2$.....Sativic acid $C_{18}H_{32}O_2(HO)_4$.

Rhicinoleic acid $C_{18}H_{32}O_2(OH)$.....Trioxystearic acid $C_{18}H_{32}O_2(OH)_3$.

And further that Saytzeff obtained from:

Oleic acid $C_{18}H_{34}O_2$.....Dioqystearic acid $C_{18}H_{32}O_2(OH)_2$.

Elaidic acid $C_{18}H_{34}O_2$.....Isodioxystearic acid $C_{18}H_{32}O_2(OH)_2$.

We are impressed with the regularity which may be expressed as follows:

The unsaturated fatty acids, when oxidized by potassium permanganate in alkaline solution, add as many molecules of hydroxyl as they contain free bonds, and give saturated fatty acids containing the same number of carbon atoms in the molecule.

This law is, however, important not only because it enables us to determine beforehand what the products of the oxydation of unsaturated fatty acids will be, but also because it gave me the method for examining the unsaturated fatty acids of the oils and fats.

The method may be described as follows:

The fats and oils are saponified and the resulting soaps dissolved in water, after which the neutralized solution is precipitated with plumbic acetate. The resulting lead salts are extracted with ether, and from the ethereal solution the unsaturated fatty acids are separated by dilute sulphuric acid, and their alkaline solution oxidized with a solution of potassium permanganate.

The composition of the oxy fatty acids contained in the oxidation product is then determined and from the number of carbon atoms and hydroxyl groups the number of carbon atoms and free bonds of the fatty acids from which the result is deduced.

According to this method the composition of the liquid fatty acids of the various drying oils have been determined, and in the following table I give the oxyacids and the percentage of them which was present in the volatile fatty acids examined:

| | Linseed oil. | Poppy oil. | Nut oil. | Hemp oil. | Cottonseed oil. |
|---|---|---|---|---|---|
| Dioxystearic acid..... | 1·2 | 8·5 | 2·5 | 4·0 | 23.0 |
| Sativic acid ..... | 6·5 | 18·5 | 25·0 | 24·0 | 31·5 |
| Linusic and isolinusic acid..... | 20·3 | 0·3 | 2.0 | 2·5 | — |

As it is evident from the above table, that by the oxidation of the oil acids, I obtained in addition to sativic acid and linusic acid, also dioxystearic acid and isolinusic acid, I will briefly describe their properties, and then show by an example, how the oxydation is effected.

Dioxystearic acid melts at 137°C, is insoluble in water, difficultly soluble in cold and readily soluble in hot alcohol, and very difficultly soluble in ether. It crystallizes from alcohol in nacreous plates, which under the microscope are found to consist of rhombic plates, the opposite angles of which are often truncated. It was first obtained by Overbeck, by treating oleic acid bibromide with moist argentic oxide; by Saytzeff, by the oxidation of oleic acid in alkaline solution with potassium permanganate. It contains one carboxyl and two hydroxyl groups, and is therefore a triatomic monobasic acid. Its alkali salts are readily soluble in water, while the barium salt is perfectly insoluble.

Isolinusic acid melts at 173° to 175° C., is soluble in cold and quite soluble in hot alcohol, and insoluble in ether. It crystallizes from water in microscopic needles. Its examination showed that it contains one carboxyl group and six hydroxyl groups, and is therefore a heptatomic monobasic acid. As its formula was found to be $C_{18}H_{36}O_8$, it must be considered isomeric with linusic acid.

The alkali salts of isolinusic acid are readily soluble in water, the barium salt slightly soluble in cold and readily soluble in hot water.

As the four oxyacids mentioned in the table are produced by the oxidation of the liquid fatty acids of linseed oil, I will show how the examination is to be conducted with linoleic acid.

Thirty gms. each of the liquid fatty acids and linseed oil are saponified with 36 c.c. potash lye of density 1·27. The soap is dissolved in 2 l. water and slowly mixed with 2 l. of a 1·5 per cent. solution potassium permanganate, with constant stirring. The liquid is at first colored dark green, and after a time manganese peroxide separates out, from which the clarified solution may be filtered after several hours. This alkaline filtrate contains the potash salts of the oxidation products produced, and is acidified with sulphuric acid to liberate them. A flucculent precipitate separates, which is filtered and dried on porous earthen slabs. This acid mixture, which I will call A. is converted into the barium salts and extracted with boiling water.

The insoluble portion of the barium salts from A is decomposed with dilute hydrochloric acid; the separated acids are filtered off and extracted with ether, after being air dried. The ethereal solution on evaporation leaves in addition to unoxidized linoleic acid, the dioxystearic acid melting at 137° C. The residue, which is insoluble in ether, consists of sativic acid.

The aqueous solution of the barium salt A is concentrated and decomposed with dilute hydrochloric acid to separate the acids. The separated acid in most cases consists of linusic acid; sometimes, however, it contains small quantities of isolinusic acid. A separation of these two acids could only be effected by fractional crystallization from alcohol.

The acid filtrate from A, which I will call B, is neutralized with potassium hydrate and concentrated to 300 cc. for each 4 l., again acidified with dilute sulphuric acid, and the precipitated acid mixture C, again separated by filtration, dried and extracted with ether. The portion of C which is insoluble in ether consists of isolinusic acid; the ethereal solution contains almost only azelaic acid, $C_9H_{16}O_4$, which is a decomposition product of linoleic acid. From the filtrate C, further small quantities of azelaic acid and other lower acids may be obtained by shaking out with ether.

Composition of the Acids of Drying Oils.—Unfortunately the yield of the oxyfatty acids is much less than should theoretically be obtained, so that the oxidation will only permit a definite conclusion as to the qualitative composition of the drying oil acids. If, however, the results obtained by the bromination of the acids or their iodine values are considered, an idea of the quantitative composition may be obtained.

The liquid fatty acids of linseed oil, hemp oil, nut oil and poppy oil consist of oleic, linoleic, linoleaic and isolinusic acid, while those of cottonseed oil consist only of oleic and linoleic acids.

Regarding the quantitative composition I may add:

1. Linseed oil acids. In the bromination of linoleic acid there is produced in addition to three other bromine products, linoleic acid hexabromide, melting at 177° C. On account of its slight solubility in ether it can almost be quantitatively determined, and it was found that 20 gms of this compound are obtained from 50 gms linoelic acid, corresponding to about 15 per cent. linolenic acid in linoleic acid, As we can also conclude from the formation of such small quantities of dioxystearic acid, that linoleic acid contains only small quantities of oleic acid, we may assume the quantity of linolic and isolinolic acid at 80 per cent., and therefore the linolic acid at 65 per cent. Further we will not be much in error in assuming that linoleic acid contains about 15 per cent. linolic acid.

2. Hemp oil acids.—In brominating the acids of hemp oil there is produced 1 part linolenic acid hexabromide to 7 parts of linolic acid tetrabromide. We may assume that the hemp oil acids contain about 70 per cent. linolic acid, 15 per cent. linolenic acid and isolinolenic acid and 15 per cent. oleic acid.

3. Nut oil acids.—As only very small quantities of linolenic acid hexabromide are produced by brominating nut oil acids we may assume that they contain 80 per cent linolic acid, 13 per cent. linolenic and isolinolenic acid and 7 per cent, oleic acid.

4. Poppy oil acids.—In the oxidation of poppy oil acids, exceedingly small quantities of acids of the series Cn $H_{2n}$ $O_8$, but quite large quantities of dioxystearic acid are produced. In brominating there is hardly any linolenic acid hexabromide formed. We may therefore assume that the poppy oil acids consists of 30% oleic acid, 65% linolic acid, and 5% linolenic and isolinolenic acid.

5. Cottonseed oil acids.—Considering that the iodine values of linolic acid and oleic acid are 181·4 and 90·0, and that the cottonseed oil acids contain only these two acids, and have the iodine value 143·0, we may assume, that the cottonseed oil acids contain 40% oleic acid and 60% linolenic acid.

Comparing the composition of the acids of the drying oils found by me, with the statements of Mulder, it will be found that he was right in assuming the presence of ordinary oleic acid. The acid which Mulder called linoleic acid is not, however, a uniform body, but a mixture of three unsaturated acids in the fatty acids of linseed oil, hempseed oil, and poppy oil. Only the acids of cottonseed oil, correspond to Mulder's theory, as it contains only linoleic acid and oleic acid.

In comparing my results with those obtained by Mulder, the question arises, how is it, that Mulder, who was such a careful investigator assumed 16 C atoms in linoleic acid, when difference in the percentage of carbon is so great, as in the case of air unsaturated containing 16 or 18 C atoms.

The cause is given in the nature of the drying oil acids and their salts. Mulder always analyzed a linoleic acid, obtained by repeatedly recrystallizing the barium salt. But the barium salt of linoleic acid absorbs oxygen from the air with great avidity, and therefore becomes less pure, the oftener it is crystallized. Such a salt can therefore only represent a partially oxidized linoleic acid, the percentage of carbon in which is considerably smaller, than for the acids $C_{18}H_{34}O_2$, $C_{18}H_{32}O_2$ and $C_{18}H_{30}O_2$

When, however, fresh linseed oil is saponified with alcoholic potash, the soap dissolved in much water, and the solution, neutralized with acetic acid precipitated with plumbic acetate, and the precipitated lead salt filtered and extracted with ether, the soluble portion of the lead salt, will, after decomposition give a linoleic acid which on drying over sulphuric acid gives the following percentages:

| | I. | II. | $C_{18}H_{32}O_2$ | $C_{18}H_{34}O_2$ |
|---|---|---|---|---|
| C ..... | 77·48 | 77.35 | 76·19 | 76·59 |
| H..... | 10·85 | 10·79 | 11·11 | 12·05 |
| | | | $C_{18}H_{32}O_2$ | $C_{17}H_{30}O_2$ |
| C..... | | | 77·14 | 77·69 |
| H..... | | | 11·43 | 10·79 |

In conclusion, I will only examime whether the composition of the liquid unsaturated fatty acids as determined by me, agrees with the already known facts.

As the drying of oils consists in the absorption of oxygen, with the formation of solid oxidation products, oleic acid, we may assume, that the more oleic acid a drying oil contains, the poorer will be its drying properties.

There can also be no doubt that the linolenic acid, and the isolinolenic acid, which contains six free bonds will be capable of absorbing more oxygen than the linoleic acid containing only four free bonds. An oil will therefore dry better, as it contains more linolenic and isolinolenic acids.

According to Mulder's investigations the quantity of saturated fatty acid of the series $CnH_{2n}O_2$ contained in drying oils, varies from 10 to 15 per cent. for linseed oil, hempseed oil, poppy oil and nut oil. The quantity of solid, saturated fatty acids in cottonseed oil exceeds 30 per cent.

It is evident that an oil will dry less, as it contains more saturated fatty acids. Taking all these points into consideration, it would be possible, without knowing the drying properties of the different oils, to conclude that linseed oil must be the best drying oil, inferior but still good, hemp oil and nut oil, pretty poor poppy oil, and poor cottonseed oil.

This order of the drying oils, namely:

| | Iodine value. |
|---|---|
| Linseed oil..... | 170 to 181 |
| Hemp oil..... | 157.5 |
| Nut oil..... | 145.7 |
| Poppy oil..... | 141.0 |
| Cottonseed oil..... | 105.0 |

actually corresponds with the observations made in practice.—*Drog. Ztg.*

## DYE MARKET

**Note**—*Our prices are for large lots except when otherwise specified, and buyers of small quantities must expect to pay an advance on these figures.*

*The prices current will be found on page 50.*

TUESDAY EVENING, Sept. 4, 1888.

There has been more or less doing in the market for dye and dyestuffs during the week under review, but an absence of large orders is noticed, the business being of a jobbing character entirely, and being accomplished in the usual matter-of-fact way. Features of interest are scarce, while prices are unchanged.

Albumen—Stocks of this article are being taken to a moderate degree, but no special trading is reported, since we last wrote. The market on the other side is much higher than at this port, and as a consequence prices are quoted with considerable firmness. Quotations rule at 15@16c for domestic blood and 16@16½c for imported. Egg is in fair demand at 60@65c.

Aniline Colors—Have sold steadily in a jobbing way, but the market is wholly without feature. Quotations vary, according to the brands and quantity desired.

Alizarine—The demand is reported as being slightly on the increase, with prices ruling steady at figures which are considered fairly satisfactory. The quotations are 17½@20½c, according to quantity and quality.

Bichromate of potash has not sold to any considerable extent, while the market is identical, both as regards position and quotations, which are 10½c for 5 cask lots or over, with a higher figure named on smaller lots. Bichromate of soda has sympathized with the potash and still rules quiet and unaltered at 8½c for 5 cask lots or over.

Cochineal is still quiet and stocks are not inquired for, the market being wholly inanimate. Quotations are nominal at 30c for Teneriffe silver, 29@30c for black, and 33c for gray black.

Cutch—There are good offerings of this article, but no special demand, and there is no apparent firmness in the giving of prices. From store 6¼@6½c is quoted for Diamond S M, while sales of 500 bales are reported from vessel in port at 6@6¼c.

Divi divi continues dull with stocks large, and the market is in anything but a satisfactory position. Buyers are holding off for lower figures which they think will rule in the near future, and should the market go to $35, trading would result. At present we do not hear of anything offering below $40.

Dyewoods—The market for stick wood is in identically the same position as at the time of our last report. Only one cargo has been received, namely, of Jamaica, which arrived on contract. Manufacturers, it is said, are cutting up wood more freely, and stocks are being consumed steadily, and by some it is thought that before a great while manufacturers will be compelled to enter the market for supplies. It is also said importers are awaiting this period, and are delaying shipments to this port with the idea of forcing manufacturers to raise their views in regard to prices. On Extracts we can note nothing new, or of special interest. Trading has continued moderate, with a continued better feeling being noticeable. The following are quoted: For 51° extract, 6½@6¾c is quoted, with 42° at 5¼@5½c. Imported 51° continues to rule at 10c., fustic at 7½@9½c for 51° according to quality. Solid logwood is held at 10¼@11½c. Sumac is quotable at 3¼@3¾c for domestic liquid 51° for imported the prices are very much unsettled and in buyers' favor. Hypernic at 12½@14c for 51° and 20@24c for solid.

Gambier—Is without special feature, while the market has eased off somewhat. Sales have continued of jobbing proportions, at quotations which are 6¾c on spot and 6@6¼c for arrivals now due. The stock in store at this port on Sept. 1st was estimated to be some 286 bales, while in Boston there were 1500 bales.

Indigo.—Both Guatamalas and Bengals have ruled rather quiet, with nothing of interest noticeable. The former is quoted at 70@85c, while Bengals is ruling at 78@85c for low grades, $1 10@1 20 for medium, and $1 25@1 40 for the best kinds. The market is quoted steady at these figures. Madras is in only moderate request at 35@55c.

Nutgalls.—The market is quoted quite steady, and the feeling continues good. A sale of 50 cases China's is reported, at 14½@15c, but as this was to a dealer it does not represent the market, the quotations being 15@16c. An arrival of 50 bags Allepos is reported, which it is said will probably go into store. The quotations are 14¾@15c

Prussiate of Potash is rather quiet, although occasional sales are reported, but they have been of small proportions, and occasioned no comment. Yellow continues to be quoted at 19c, while red is ruling at 45c.

Sumac is unchanged, with the demand rather light, and the market without feature. Owing to the number of kinds in the market, quotations vary, stocks being obtainable from $57½@62½. Of a recent arrival a sale on spot of a moderate quantity has been made at the latter figure, while other sales are reported, say 250 bags, in a jobbing way, at prices ranging from $60@65. Virginia is featureless, with small sales reported, at previous figures.

Tin Crystals are wanted, in small jobbing lots, at our previous quotations of 16@18c in bbls, and 16½@20c in kegs, with the market quoted steady at these figures.

### Sizing with Wax, Stearine, Fat and Paraffine.

Sizing with wax gives the paper a very smooth surface, but the wax is too dear for common kinds of paper. It is, however, of advantage in procuring the peculiar waxy glossiness and is used for pressboards and very smooth paper board covers. In the treatment of surfaces and in coated paper manufacture it finds many uses.

According to Dropisch, the proportions are: Fifty kilogs. of caustic soda to 200 kilogs. of wax. To the caustic lye, or liquor, containing 80 per cent. of soda ash (from the 50 kilogs. of caustic soda) and 350 liters of boiling water, with an addition of 5 kilogs. of freshly burned lime, the wax is gradually added and the mixture is boiled for three hours. The wax is precipitated from its solution, as in rosin size, by the addition of 1 kilog. of sulphate of alumina to 1 kilog. of wax in the beating engine.

In obtaining a fatty gloss on fine papers the use of a small quantity of stearine is adopted in some mills. When stearine is thus employed a process must be adopted, as in the case of rosin in sizing, to have it enter the pulp in as finely divided a state as possible. This can be best obtained, according to Dr. Muth, by boiling (not saponifying) stearine with an equal quantity of borax dissolved in water. When this solution of stearine in borax is diluted with more water a milky white liquid is created, as in diluting the rosin liquor, and which gives no deposit after being left standing for several days.

That the stearine is not completely dissolved in the borax, or is again precipitated when diluted with water, is owing to the undissolved stearine very finely divided showing itself like any other fat.

If the solution and mixture of this stearine borax are put in the beating engine after the rosin sizing is completed the actually dissolved stearine will be precipitated by the excess of sulphate of alumina still present, and settle on the fibers like the finely divided and undissolved stearine.

The extraordinary fine distribution obtained in this way is still further increased by the stearine melting at 60° to 70° Celsius (140° to 158° Fahr.), and thus passes on to the drying cylinders, in a liquid state and spreads out more. The paper thus becomes more glossy, as is the case in ironing linen when a little stearine is mixed with the starch.

Borax appears to be specially adapted to dissolving stearine, because it is neutral and has no effect on the alumina salts in the pulp. Soda would be equally adaptable did it not neutralize a part of the alumina.

Dr. Muth found that the use of 40 grams of stearine and as much of borax to the 100 kilos. of paper gave the desired result. With such small quantities one can always be sure that the necessary quantity of sulphate of alumina is present in the pulp.

If more stearine is used it becomes useless for writing, as such fatty paper will not take ink, and other fats for the same reason must only be used in small quanties for writing papers.

It would be difficult in any case to find a sizing matter which would repel water like rosin and yet absorb acid liquids like ink.

Fat sizing is often required where a smooth and water repellent surface is needed, as in many kinds of wrapping papers.

According to Dropisch in making fat size 7½ kilogs. of soda ash are dissolved in 50 liters of boiling water, ¾ kilog. of freshly burned lime added, and the whole stirred during a quarter of an hour, when the soda is made caustic. Into the filtered liquor are put 50 kilogs. of melted beef suet, the mass being kept boiling for three hours and drawn off. This fat size is used in combination with rosin soap in the proportion of 1.6 in the usual way and is very well adapted for brittle papers, especially for cellulose and brown wood papers.

Paraffine neither saponifying or dividing finely, is not suited for sizing, but as it makes paper transparent it is used for tracing papers and in making water repelling wrapping papers from raw papers.—*Hoffman's Handbuch de. Papier Fagrikation.*


**Wm. Pickhardt & Kuttroft,**

SOLE IMPORTERS O

**Dyestuffs, Colors and Chemicals,**

MANUFACTURED BY

Badische Anilin-& Soda-Fabrik

Stuttgart & Ludwigshaven o/Rhine, Germany.

**98 Liberty Street,**

BRANCHES: Boston, Philadelphia. Chicago.

**NEW YORK.**

Coal Tar Dyes, Fine Colors, Dyewood Extracts, Ultramarine, Alizarine.

**E. COEZ & CO.,**

SPECIALTIES FOR Wool Cotton, and Silk Dyers.

E. COEZ & Co. TRADE MARK

SPECIALTIES FOR Calico Printers.

ST. DENIS, (SEINE), FRANCE,

MANUFACTURERS OF

**DYEWOOD EXTRACTS.**

*All packages bear our Trade Mark (branded) and we guarantee absolute uniformity in deliveries of our products.*

SOLE U. S. AGENTS,

35 India Street, BOSTON. | SYKES & STREET, 21 Cedar Street New York. | 43 North Front Street PHILADELPHIA.

**Schoellkopf, Hartford & Maclagan,**

LIMITED.

BUFFALO ANILINE COLORS TRADE MARK

3 CEDAR STREET, NEW YORK. | 103 MILK STREET, BOSTON MASS.

**MAGENTA**—Strong, Bright, Cheap.

**BUFFALO BROWN**—The New Bismarck Brown.

**SCARLET 3 B**—Patented, Substitute for Acid Magenta.

Also Cotton Blues, Safranine, Chrysoidine, Orange, &c.

All made by New Process.

*SEE THAT ALL PA GES BEAR ABOVE TRADE MARK.*

*APPLY FOR SAMPLES, QUOTATIONS, ETC.*

**NOTICE!**

**Acid Magenta**

Patented Nov. 29th, 1881.

**No. 250,247.**

The Hon. Judge Wallace, sitting Circuit Judge of the United States, having on the 31st day of January, 1887, rendered a very elaborate opinion sustaining the above patent, we, the owners thereof, hereby warn any and all persons manufacturing, selling or using this product without our license, that they will be prosecuted.

R. Holliday's Sons,

No. 7 Platt St., New York City.

N. B.—Any person furnishing proof of infringement will be suitably rewarded.

1858 1887

**Welch Holme & Clark**

COMMISSION MERCHANTS

AND DEALERS IN

Druggists' and Soap Makers' Materials

Soda Ash, Caustic Soda, Sal Soda, Potash, Palm Oil, Cocoanut Oil, Rosin, Pearl Ash, Turpentine, Grease, Tallow, Cottonseed Oils

AGENTS FOR THE SALE OF

**HOOF OINTMENT.**

BEST THING IN USE.

381, 382 and 383 West Street, AND 141 to 149 Barrow Street.

**Charles S. Bush,**

Importer and Dealer in

DYESTUFFS, CHEMICALS, AND Manufacturers' Supplies,

20 Exchange Place, 172 Broad Street, 36 India St., Boston, Mass. Providence, R. I. U. S. A. 11 Granite Block, Fall River, Mass.

Cable Address: "Bush" Providence.

**JOHN D. LEWIS.**

MANUFACTURER OF

Dyewoods and Extracts,

Importer of DYESTUFFS and CHEMICALS,

3 & 4 EXCHANGE PLACE, Providence, Works: Charles & Bank Sts., R. I.

Cable Address: "LEWIS."

# GLOBE ANILINE WORKS

HELLER & MERZ,

Manufacturers and Importers of

ANILINES.

**55 Maiden Lane, NEW YORK.**

---

HENRY MERZ, PRES'T. CHAS. F. ZENTGRAF, SEC'Y. W. HOFFMANN, TREA

## The Consolidated Ultramarine Co.
(Limited.)

Manufacturers, Importers and Dealers in

# ULTRAMARINE,

**BALL BLUE and**

**BARREL PAINT**

*No. 55 Maiden Lane,*

C. U. C.
TRADE MARK.

NEW YORK.

---

## PITTSBURGH TAR CHEMICAL WORKS.

## Slocum, Lloyd & Orr, Ltd.

**REFINERS OF COAL TAR**

And Manufacturers and Dealers in all its Products.

SPECIALTIES.

## Naphthalene and Carbolic Acid

**CRUDE, REFINED AND IN CRYSTALS,**
FROM 5 PER CENT. TO 85 PER CENT.

Also Crude Benzole, Solvent Naphthas, Carbolate Powder, The Universal Disinfectant, in bulk or packages; Moth Powder and Paper, White Tar Paper and a superior quality of

**OIL MYRBANE.**

OFFICE AND WORKS,
P. O. Box 566, Allegheny, Pa.
PITTSBURGH, PA:
Eastern Agents—CHAS. T. WHITE & SON, 96 & 98 Maiden Lane, New York.

---

WILLIAM KING. ROBERT A LAWRIE.

## J. C. BLOOMFIELD & CO.,

IMPORTERS OF

## Indigos, Dyestuffs, Aniline Colors

&c.

MACHINERY FOR CALICO PRINTERS BLEACHERS AND DYERS.

Lappings, Cotton, Woolen, Rubber and Composition Machine Blankets,

DOCTORS AND DOCTOR FILES.

**14 DEY STREET, NEW YORK,**

BRANCH OFFICE —AND—
29 Weybosset St., Prov., R. I. Manchester, Eng.

---

## JAS. L. MORGAN & CO.,

MANUFACTURERS IMPORTERS AND DEALERS IN

**ACIDS, DYEWOODS, DYESTUFFS,**

CHEMICALS AND DYEING DRUGS,

47 Fulton St., New York. Hudson River Chem. W'ks & Dyewood Mills

---

## DAVIS, WOLT & CO.,

BROKERS IN

## Drugs, Dye Stuffs, Dyewoods, Chemicals, Oils, &c.

Agents for

The Greenbank Alkali Co's Chlorate, Caustic and Carbonate of Pot ash, and 76 and 98 Per Cent. Caustic Soda.

**58 PINE STREET, NEW YORK.**

---

## HOLLINGSWORTH & PETERSON,

BROKERS IN

## Chemicals, Dyestuffs, Drugs and Spices.

49 NORTH FRONT STREET, PHILADELPHIA.

---

## HOWE, BALCH & TAY,

Importers and Dealers in

INDIGO, CUTCH, DYESTUFFS,
DYEWOOD EXTRACTS
CUDBEAR, ARCHIL,
EXTRACT OF INDIGO &c

**Commission Merchants in East India Merchandise.**

BOSTON—70 Kilby Street. PHILADELPHIA—17 North Fron
NEW YORK—77 Water Street. CALCUTTA—15 Hare St.

AGENTS FOR

ARBUTHNOT & CO., Madras, India.
PUNNETT & CO., Bombay, India.
HENRY TAY & CO., Buenos Ayres

---

RIVERSIDE DYEWOOD MILLS AND EXTRACT WORKS

## John M. Sharpless & Co.,

—MANUFACTURERS OF—

# Pure Extract of Logwood

AND ALL KINDS OF DYEWOODS.
—IMPORTERS OF—

**Indigo, Cutch, Chemicals, &c.,**

20 & 22 N. FRONT ST., PHILADELPHIA

---

# Bi-chromate of Potash

MANUFACTURED BY

# Kalion Chemical Co.

## HOLLINGSWORTH & PETERSON,

**49 North Front St., Philadelphia,**

SOLE AGENTS FOR

Pennsylvania, New Jersey, New York and New England States.

---

## THE TURKEY RED OIL MANUFACTURING CO

(INCORPORATED 1884.)

**WORKS AT - - - - - - JERSEY CITY, N. J.**

OFFICE, 14 DEY STREET, NEW YORK.

We are prepared to offer **TURKEY RED OIL** or **ALIZARINE ASSISTANT** in any strength required and GUARANTEED made from pure Castor Oil.

All orders to be addressed to

**J. C. BLOOMFIELD & CO.,**

*41 DEY STREET, NEW YORK.* *SELLING AGENTS*

---

## NEW YORK COAL TAR CHEMICAL CO.,

Formerly, PAGE, KIDDER & FLETCHER,
10 Warren St. N. Y

## CARBOLIC ACID, Crystals Liquid.

*Myrbane Oil, Black Varnish, Creosote, Naphtha, &c.*

---

## Fabriques de Produits Chimiques de Thann et de Mulhouse, (Alsace)

REGISTERED TRADE-MARK.

MANUFACTURERS OF

Aniline Oils, Aniline Salts, Toluidines,

## DYEWOOD EXTRACTS, DYESTUFFS AND CHEMICALS

Pigments, Carmines, Mordants, Etc.,

Branch Office, No. 6 Cedar Street,
CHAS. A. TETAZ. Manager. NEW YORK.

---

## QUERCITRON BARK.

J. T. McKENNA,
NEW CANTON, VA.

## Extracts & Carmines —OF— INDIGO,

TAYLOR & BARKER,
Manufacturing Chemists LOWELL, MASS

THOMPSON & BEDFORD COMPANY LIMITED
MINERAL
LUBRICATING
OILS
NEW-YORK

HIGH FLASH HIGH VISCOSITY

PARAFFINE or PALE OILS, 885, 905, 915, and 920° Sp. Gr. in Flash Point ranging from 330° to 410°
BLACK OILS, 15° Cold Test, 340° Flash. 25° to 30° Cold Test, 360° to 400° Flash.

NATURAL WOOL OILS, AMBER MACHINERY OILS, NEUTRALS OF WHITE & LEMON COLOR,
ROPE AND JUTE OILS,
DARK AND FILTERED CYLINDERS, Etc., Etc., of the highest grades
CRUDE OR SCALE AND REFINED PARAFFINE WAX.

128 PEARL STREET, NEW YORK.

Ducie Buildings, Bank Street, Manchester, England.
36 & 38 Stern Strasse, Frankfort-on-Main, Germany.
17 Rue de Faubourg Montmartre. Paris, France.

MAVERICK OIL CO.,

REFINERS AND SHIPPERS OF

Maverick Standard Burning Oils, Naphthas AND Gas Oils

OF ALL GRADES IN BULK, BARRELS AND CASES.

REFINERY: Chelsea Street, EAST BOSTON.
OFFICE: 61 Broad Street, BOSTON.
WAREHOUSES: 33 & 35 Commercial St., PORTLAND, ME.
Front, Cor. May Street, BANGOR, ME.

PROPRIETORS OF THE WELL-KNOWN BRAND OF

CENTENNIAL SAFETY OIL.

This Oil, by its High Test, is safer in use than other Burning Oils, and gives the most brilliant light. It does not crust the wick, and is free from disagreeable oder and smoke in burning.

*Oils Delivered by the car load in bulk or in barrels at any point in New England.*

EMPIRE REFINING CO.,

LIMITED.

Refiners and Packers of Petroleum and its Products

IN BARRELS AND CASES.

OFFICES:

26 BROADWAY, NEW YORK.

Works, NEWTOWN CREEK, GREENPOINT, L. I.

# BEACON OIL CO.,

## PACKERS & SHIPPERS OF PETROLEUM

IN CASES AND BARRELS.

**For Export and Home Trade,**

AND PROPRIETORS OF THE WELL-KNOWN BRANDS.

**Beacon Light (High Test) and Beacon (Standard.)**

**ALSO CRUDE PETROLEUM AND NAPHTHAS.**

**Works, Chelsea St., E. Boston.** **Office, 26 Broad St., Boston.**

# ACME OIL COMPANY:

REFINERS OF PETROLEUM.

## Manufacturers of the Crown Acme Oil.

**Prepared with great care for Family use, absolutely safe and the best Illuminator in the World.**

**Works at Olean, N. Y. and Titusville, Pa.** **Main Office, 26 BROADWAY, NEW YORK.**

# Vesta Oil Works,

REFINERS AND PACKERS OF

## PETROLEUM AND ITS PRODUCTS,

**Office, 134 Maiden Lane, New York.**

**Works. First and Bond Streets** SOUTH BROOKLYN.

IMPORTANT TO RAILROAD MANAGERS AND MASTER MECHANICS.

# SIBLEY'S PERFECTION VALVE OIL

**More perfect lubrication insured and entire freedom guaranteed from corrosion of cylinders and destruction of steam joints by fatty acids. In exclusive use on forty railroads. References and prices furnished upon application. Has stood the test for 17 years.**

**Make exclusive Specialty of the manufacture of Valve and Signal Oils for Railroad use.**

## SIGNAL OIL WORKS, Limited,

**J. C. SIBLEY, President.** **FRANKLIN, PA.**

# McKIRGAN OIL CO.

MANUFACTURERS OF

**"Giant Engine" and "Imperial Cylinder" Oils.**

**Dealers in best grades of Lubricating and Illuminating Oils, Paraffine Wax; Naphtha and Gasoline of all qualities**

**94 to 106 PASSAIC STREET, NEWARK, N. J.**

**MANUFACTURER OF EVERY PRODUCT OF PETROLEUM.**

# Eclipse Lubricating Oil Co.,

(LIMITED,)

## OF FRANKLIN, PA.,

MANUFACTURERS OF

## Lubricating and Burning Oils of all Grades & Gravities and Cold Tests

**ADAPTED TO THE WEATHER AND CLIMATE.**

We make 300 deg. test BURNING OIL A SPECIALTY. We have the largest filtering capacity in the world, and turn out a very large amount of every grade of filtered petroleum Our WOOL OIL STOCKS and NEUTRAL OILS are used the world over.

ALSO MANUFACTURERS OF THE CELEBRATED

# MATCHLESS VALVE & CYLINDER OIL.

Warranted not to CORRODE the IRON or EAT the PACKING, and to make more mileage than tallow or lard. and which we sell only to Railroad Companies or through our authorized agents. The Matchless Cylinder Oil cannot be bought of dealers. In use on 60 Railways.

**Main Office, Franklin, Pa.** **Refineries, Franklin, Pa, Olean N. Y. Erie, Pa.**

The Devoe Manufacturing Co.
75 New Street, New York City,
Proprietors and Manufacturers of the
Celebrated brands of Illuminating Oils.
Devoe's Brilliant—Photolite—Sterling
and Nonpareil

---

# ACME OIL CO.,
# REFINERS of PETROLEUM,

MAKE A SPECIALTY OF SUPPLYING THE
DOMESTIC TRADE.
**Works at Titusville, Pa. and Olean, N. Y**

We offer all grades of Illuminating Oils of the finest quality and guarantee the greatest care and promptness possible in filling orders. Have unequalled facilities.

*Main Office, 26 BROADWAY, NEW YORK.*

---

# STANDARD OIL CO.,

**NAPHTHA DEPARTMENT.**

# Refiners of Naphtha and Gasoline.

---

**Deodorized Naphtha,**
Especially valuable to Varnish Manufacturers, Painters and Printers.

**Redistilled Naphthas,**
For Gas Companies.

**Deodorized Stove Gasoline.**
Meeting every requirement of the varied Vapor Stove Burners.

**Redistilled Gasoline,**
For Street Lamps, Vapor Burners and Torches.

**86° to 90° Gasoline.**
For Gas Machines.

Agencies in all the Principal Cities through the West and South.

**Office, 43 Euclid Ave., Cleveland, Ohio.**

## CHEMICALS

### POWERS & WEIGHTMAN,
**PHILADELPHIA, AND NO. 56 MAIDEN LANE, NEW YORK.**

MANUFACTURERS OF

**QUININE, QUINIDINE, CINCHONIDINE, CINCHONINE,**—Sulphate and other Salts.
**MORPHINE**—Sulphate and other Salts.
**CODEINE, STRYCHNINE, SILVER**—Nitrate, **BROMIDE** and **IODIDE**
**POTASSIUM, CHLOROFORM, ETHERS, MERCURIAL**
**EPSOM SALT, COPPERAS,**
**ACIDS**—Tartaric, Citric Sulphuric, Nitric, Muriatic, etc.
AND A GENERAL ASSORTMENT OF

Chemicals for Use in Medicine and the Arts.

---

### Tartar Chemical Company
Manufacturers of 99-100 Per Cent
### CREAM OF TARTAR
**TARTARIC ACID, TARTAR EMETIC, &c.**
OFFICE AND WORKS,
**Morgan and Warren Sts., JERSEY CITY, N. J.**

---

### MARX & RAWOLLE,
MANUFACTURERS OF
# GLYCERINE
CHEMICALLY PURE.
**Glycerine for Nitro and for all other Manufacturing Purposes.**
**163 WILLIAM STREET, NEW YORK.**

---

### MARSH & HARWOOD CO.,
Cleveland, O. St. Louis, Mo. Cincinnati, O.
MANUFACTURERS OF **Chemically Pure Distilled 1.260 Sp. Gr.**
# Glycerin.
ALSO GLYCERIN FOR NITRO-GLYCERIN AND OTHER PURPOSES.
**Mixed Acid for Nitro-Glycerin.**
SULPHURIC ACID, NITRIC ACID, SULPHATE AMMONIA, AQUA FORTIS, MURIATIC ACID, COPPERAS, AQUA AMMONIA, &C., &C.
New York Agents for the sale of Glycerin, Standard Chemical Co., 71 Wall St.

---

### CHAS. PFIZER & CO.,
**NEW YORK,**
MANUFACTURERS OF
**Pharmaceutical and Photographic Chemicals.**
**CREAM TARTAR CRYSTALS AND POWDERED 99°**
**TARTARIC ACID, ROCHELLE SALTS,**
**Refined and Powdered Borax. Refined Camphor.**

---

**NEW YORK DYEWOOD, EXTRACT AND CHEMICAL COMPANY**
**55 BEEKMAN ST., NEW YORK.**

---

# Union Chemical Works
Manufacturers of 100 per cent.
# CREAM OF TARTAR.
**Works: NEWARK N. J.** **New York Office, 49 CEDAR STREET.**

---

### BELLHOUSE, DILLON & CO,
IMPORTERS OF
# Chemicals, Dyestuffs and Acids.
**9 Custom House Square, Montreal.**

---

### Sugar and Gelatine Coated Pills,
**STANDARD AND FANCY COURT PLASTERS**
## J. E. MOORE.
**MANUFACTURING CHEMIST,**
**415 BROADWAY, ALBANY, N. Y.**

---

# Chicago Glycerine Co.,
**41st and Clark Sts.,**
(Union Stock Yards,) TRADE MARK **CHICAGO.**
REFINERS, MANUFACTURERS AND SHIPPERS
—OF—
# Chemically Pure Glycerine,
ALSO
## GLYCERINE FOR NITRO AND OTHER PURPOSES.
CORRESPONDENCE SOLICITED.

---

### LAIST & HOCHSTETTER,
Successors to HARTMANN, LAIST & CO.,
**CINCINNATI, OHIO,** MANUFACTURERS OF
# GLYCERINE,
**DISTILLED Chemically Pure, Specific Gravity 1.260.**
**Also GLYCERINE for NITRO-GLYCERINE and other Manufactures.**
AGENTS:
New York, AUGUST GIESE, 48 Cedar Street. | Boston, R. H. PARKER & Co.,
Philadelphia, D. C. LANDIS, 17 N. Front St. | San Francisco, PH. WOLF & Co

---

### GOODWIN M'F'G CO.,
**ST. LOUIS, MO.** Manufacturers of
# GLYCERINE.
**Distilled Chemically Pure, Specific Gravity 1.260.**
**Also GLYCERINE for NITRO-GLYCERINE and other purposes.**

---

### M. WERK & CO.,
CINCINNATI, O.
MANUFACTURERS AND DISTILLERS OF PURE WHITE ODORLESS AND
Chemically Pure
# GLYCERINE
ALSO GLYCERINE FOR NITRO-

---

### PROCTER & GAMBLE,
*CINCINNATI.*
Formerly AMERICAN GLYCERINE COMPANY,
## Manufacturers AND Refiners OF Glycerine.

---

CRESCENT WHITING MILLS BROOKLYN. TRUSLOW & Co. NEW-YORK.

### TRUSLOW & CO.,
New York.
**—CORKS,—**
BREWERS' AND BOTTLERS' SUPPLIES
**WHITING.**

---

# THE PATENT COVER CAN.

WM. VOGEL & BROS.
Manufacturers of
**Tinware for the Drug, Paint, Grocer and Spice Trades.**
ESTIMATES FURNISHED ON APPLICATION
This can is provided with a cover, which being replaced after the top of the can (which is of thin tin) has been cut out, will enable the consumer to preserve the contents.
**41—47 South 9th Street BROOKLYN, (E. D.) N. Y.**

# MYRBANE

*CELEBRATED "LION" BRAND.*

**W. C. BARNES & CO., London, Manufacturers.**

As Sole Agents for this well known brand, we can always offer the lowest prices consistent with the absolute purity of quality.

Sole Agents:
**WM. J. MATHESON & CO.,**
**20 CEDAR ST., NEW YORK.**

Branch Houses: Boston, 147 Milk Street. Philadelphia, 18 N. Front Street. Providence, 22 S. Water Sreet.

---

C. O. BAXTER, Prest. CHAS. OTTMANN, Secy. H. E. NAFFZ, Treas.

# The Gilson Asphaltum Co

**115 & 117 Pine St., St. Louis, Mo.**

# "GILSONITE"

TRADE-MARK REGISTERED,

Finest Quality of Asphaltum.

**CORRESPONDENCE SOLICITED.**

---

## WHEELER'S
# Patent Wood Filler

Breinig's Lithogen Primer, Silica Paints,
**WOOD STAINS, WHITE DRYERS, JAPANS, Etc.**

THE
Bridgeport Wood Finishing Co., New Milford, Conn.
**New York Office, 240 Pearl Street,**
**Chicago Office and Warehouse, 211 East Randolph St.**

---

**JEROME MARBLE & CO.,**
IMPORTERS AND WHOLESALE DEALERS IN
Oils, Drugs, Dyes, Chemicals, Starches, and Paints.
**WORCESTER, MASS., U.S.A.** **42 Pearl St., Boston, Mass., U.S.A.**
*Cable address "ELAINE" Boston.*

---

# ROESSLER & HASSLACHER,

Manufacturing and Importing Chemists.

## R. & H. Purified Chloroform, U.S.P.

Manufactured from Pure Acetone, under our United States Patent No. 383,992.

## G. & S. Sulphate of Quinine

**(Gold and Silver Brand.)**

## Dr. Seyferth's Acetanilide

**(Four times more effective than Antipyrine.)**

## Oxalic Acid & Prussiate of Potash,

**And other Chemicals for Pharmacy and the Arts.**

**78 PINE STREET,** **NEW YORK.**

---

# PRESS BAGGING,

**CAMEL HAIR OR WOOL.**

THOMAS SUGDEN, LOWELL, MASS.

---

Acetic Acid. Brimstone. Oil Vitriol. Copperas. Sulphur. Manufacturers

Passaic Chemical Co. 85 JOHN ST., NEW YORK.

---

**DRUGS, CHEMICALS AND PHARMACEUTICAL PREPARATIONS.**

# EVANS SONS & CO.

## Wholesale and Export Druggists,

**56 HANOVER ST., LIVERPOOL.**

**EVANS, LESCHER & WEBB, London, England.**

**EVANS SONS & MASON (Lt'd.), MONTREAL and TORONTO, CAN.**

Are prepared to make special arrangements with American buyers to purchase Drugs, Chemicals, etc., on the English and Continental markets, on commission. Being established in London and Liverpool over 50 years, and having a most extensive home and foreign trade, Messrs. E. S. & Co. are amongst the largest buyers of Drugs, etc., on the Liverpool and London markets, and can, therefore, offer special facilities to their correspondents.

---

# DR. KNORR'S ANTIPYRINE.

**Patented.**

**SOLUBLE IN COLD WATER.**

The best known of all modern antipyretics; has a world-wide reputation.

Antipyrine reduces temperature quickly, safely, and without any secondary effects.

Recommended in Diseases of Childhood, Typhoid Fever, Erysipelas, Acute Rheumatism, Phthisis, Headache, Migraine, Hay Fever, Asthma, Seasickness, Whooping Cough.

**Dr. Germain See., Paris, prefers Antipyrine to Morphine in Hypodermic Injections, to relieve pain.**

**LUTZ & MOVIUS, New York.**

SOLE LICENSEES FOR THE UNITED STATES OF AMERICA.

---

# BROWN BROTHERS & CO.,

**New York, Philadelphia, Boston,**
**and ALEX BROWN & SONS, Baltimore,**
Members of New York, Philadelphia and Baltimore Stock Exchanges,
EXECUTE ORDERS FOR ALL INVESTMENT SECURITIES.
RECEIVE ACCOUNTS OF BANKS, BANKERS, CORPORATIONS AND FIRMS ON FAVORABLE TERMS.
BUY and SELL BILLS OF EXCHANGE, ISSUE COMMERCIAL and TRAVELERS' CREDITS IN STERLING.
Available in any part of the world; for use in this country, Canada, Mexico and the West Indies.
*Make Telegraphic Transfers of Money between this country, Europe and the British and Danish West Indies.*
MAKE COLLECTIONS OF DRAFTS
Drawn abroad on all points in the United States and Canada, and of Drafts drawn in the United States on foreign countries.

---

# SMITH & KLINE CO.,

PHILADELPHIA.

**Importers, Manufacturers, Jobbers.**

COUDRAY'S SACHET POWDERS
—AND—
LUBIN'S POWDER AND EXTRACTS
NOW LANDING IN LOTS AT CLOSE PRICES.

**Also Benbow's Elder Flower Soap, Eno's Fruit Salts, Holloway's Pills and Ointment, English Chip Pill Boxes, nested, and a full line of English Patent Medicines.**

---

# COLTON'S SELECT FLAVORS.

**Strictly Pure Delicious Flavors, of Choicest Fruits,**
Wholesale by BOGLE & LYLES, E. C. HAZARD & Co., and others, New York; H. L. STYLE & Co., Cincinnati; FRANKLIN MCVEAGH & Co., Chicago; GITHENS & REXSAMER, Phila., and Wholesale Grocers and Druggists.

---

# BELKNAP STANDARD PUTTY WORKS.

The Oldest Putty Establishment in the United States.

E. S. BELKNAP'S SON, Proprietor,

Near Maiden Lane, **No. 8 Cold St., New York.**

---

# ACHILLE STARACE,

**23 SOUTH WILLIAM STREET,** **NEW YORK.**

SOLE AGENT IN THE U. S. FOR THE

## PURE GREEN OLIVE OIL SOAP

Of the "SAVONNERIE MARSEILLAISE," of BARI (Italy,) also Importer of
ITALIAN OLIVE OILS.

---

**DAVID B. CROCKETT CO.,** BRIDGEPORT, CONN.

Spar Composition
—AND—
Architectural Wood Preservatives.

TRADE MARK. D.B.C. PATENTED. EST. 1860.

David B. Crockett

The only Genuine in the Market.

**NEW YORK OFFICE,**
**84 WILLIAM ST.**

---

# Parrott Varnish Co.,

**BRIDGEPORT, CONN.,**
**Manufacturers of**

FINE COACH & CAR VARNISHES

---

WARRANTED PURE

# ROCK CANDY SYRUP and SUGAR COLORING.

**Save 5 to 10 per cent. by sending to the manufacturer,**

EST'D. 1860. **S. HAMMERSCHLAG, 50 Dey St., New York.** EST'D. 1860